Lys Ala Asp His Val Ser Thr Tyr Ala Ala Phe Val Gln Thr His Arg
        35   40   45

Pro Thr Gly Glu Phe Met Phe Glu Phe Asp Glu Asp Glu Met Phe Tyr
        50   55   60

Val Asp Leu Asp Lys Lys Glu Thr Val Trp His Leu Glu Glu Phe Gly
65   70   75   80

Gln Ala Phe Ser Phe Glu Ala Gln Gly Gly Leu Ala Asn Ile Ala Ile
                85   90   95

Leu Asn Asn Asn Leu Asn Thr Leu Ile Gln Arg Ser Asn His Thr Gln
            100   105   110

Ala Thr Asn Asp Pro Pro Glu Val Thr Val Phe Pro Lys Glu Pro Val
            115   120   125

Glu Leu Gly Gln Pro Asn Thr Leu Ile Cys His Ile Asp Lys Phe Phe
    130   135   140

Pro Pro Val Leu Asn Val Thr Trp Leu Cys Asn Gly Glu Leu Val Thr
145   150   155   160

Glu Gly Val Ala Glu Ser Leu Phe Leu Pro Arg Thr Asp Tyr Ser Phe
                165   170   175

His Lys Phe His Tyr Leu Thr Phe Val Pro Ser Ala Glu Asp Phe Tyr
            180   185   190

Asp Cys Arg Val Glu His Trp Gly Leu Asp Gln Pro Leu Leu Lys His
        195   200   205

Trp Glu Ala Gln Glu Pro Ile Gln Met Pro Glu Thr Thr Glu Thr Val
    210   215   220

Leu Cys Ala Leu Gly Leu Val Leu Gly Leu Val Gly Ile Ile Val Gly
225   230   235   240

Thr Val Leu Ile Ile Lys Ser Leu Arg Ser Gly His Asp Pro Arg Ala
                245   250   255

Gln Gly Thr Leu
            260

<210> 2439

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<211>   255
<212>   PRT
<213>   Homo sapiens

<400>   2439

Met Ile Leu Asn Lys Ala Leu Leu Leu Gly Ala Leu Ala Leu Thr Thr
1               5                   10                  15


Val Met Ser Pro Cys Gly Gly Glu Asp Ile Val Ala Asp His Val Ala
            20                  25                  30


Ser Cys Gly Val Asn Leu Tyr Gln Phe Tyr Gly Pro Ser Gly Gln Tyr
        35                  40                  45


Thr His Glu Phe Asp Gly Asp Glu Gln Phe Tyr Val Asp Leu Glu Arg
    50                  55                  60


Lys Glu Thr Ala Trp Arg Trp Pro Glu Phe Ser Lys Phe Gly Gly Phe
65                  70                  75                  80


Asp Pro Gln Gly Ala Leu Arg Asn Met Ala Val Ala Lys His Asn Leu
                85                  90                  95


Asn Ile Met Ile Lys Arg Tyr Asn Ser Thr Ala Ala Thr Asn Glu Val
            100                 105                 110


Pro Glu Val Thr Val Phe Ser Lys Ser Pro Val Thr Leu Gly Gln Pro
        115                 120                 125


Asn Thr Leu Ile Cys Leu Val Asp Asn Ile Phe Pro Pro Val Val Asn
    130                 135                 140


Ile Thr Trp Leu Ser Asn Gly Gln Ser Val Thr Glu Gly Val Ser Glu
145                 150                 155                 160


Thr Ser Phe Leu Ser Lys Ser Asp His Ser Phe Phe Lys Ile Ser Tyr
                165                 170                 175


Leu Thr Phe Leu Pro Ser Ala Asp Glu Ile Tyr Asp Cys Lys Val Glu
                180                 185                 190


His Trp Gly Leu Asp Gln Pro Leu Leu Lys His Trp Glu Pro Glu Ile
            195                 200                 205


Pro Ala Pro Met Ser Glu Leu Thr Glu Thr Val Val Cys Ala Leu Gly
    210                 215                 220
```

Leu Ser Val Gly Leu Met Gly Ile Val Val Gly Thr Val Phe Ile Ile
225   230   235   240

Gln Gly Leu Arg Ser Val Gly Ala Ser Arg His Gln Gly Pro Leu
                245   250   255

<210> 2440
<211> 199
<212> PRT
<213> Homo sapiens

<400> 2440

Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
1   5   10   15

Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
                20   25   30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
            35   40   45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
    50   55   60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
65   70   75   80

Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
            85   90   95

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
            100   105   110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
            115   120   125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
    130   135   140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
145   150   155   160

Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
            165   170   175

Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser

```
            180                    185                    190
```

Arg Leu Thr Asp Val Thr Leu
        195

<210>   2441
<211>   193
<212>   PRT
<213>   Homo sapiens

<400>   2441

Met Ala Ala Glu Pro Val Glu Asp Asn Cys Ile Asn Phe Val Ala Met
1   5   10   15

Lys Phe Ile Asp Asn Thr Leu Tyr Phe Ile Ala Glu Asp Asp Glu Asn
                20   25   30

Leu Glu Ser Asp Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile
                35   40   45

Arg Asn Leu Asn Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro
        50   55   60

Leu Phe Glu Asp Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg
65   70   75   80

Thr Ile Phe Ile Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met
                85   90   95

Ala Val Thr Ile Ser Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys
                100   105   110

Glu Asn Lys Ile Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile
                115   120   125

Lys Asp Thr Lys Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly
        130   135   140

His Asp Asn Lys Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe
145   150   155   160

Leu Ala Cys Glu Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys
                165   170   175

Glu Asp Glu Leu Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu
                180   185   190

Asp

<210> 2442
<211> 152
<212> PRT
<213> Homo sapiens

<400> 2442

Met Ser Arg Leu Pro Val Leu Leu Leu Gln Leu Leu Val Arg Pro
1   5   10   15

Gly Leu Gln Ala Pro Met Thr Gln Thr Thr Pro Leu Lys Thr Ser Trp
            20   25   30

Val Asn Cys Ser Asn Met Ile Asp Glu Ile Ile Thr His Leu Lys Gln
            35   40   45

Pro Pro Leu Pro Leu Leu Asp Phe Asn Asn Leu Asn Gly Glu Asp Gln
        50   55   60

Asp Ile Leu Met Glu Asn Asn Leu Arg Arg Pro Asn Leu Glu Ala Phe
65   70   75   80

Asn Arg Ala Val Lys Ser Leu Gln Asn Ala Ser Ala Ile Glu Ser Ile
                85   90   95

Leu Lys Asn Leu Leu Pro Cys Leu Pro Leu Ala Thr Ala Ala Pro Thr
            100   105   110

Arg His Pro Ile His Ile Lys Asp Gly Asp Trp Asn Glu Phe Arg Arg
            115   120   125

Lys Leu Thr Phe Tyr Leu Lys Thr Leu Glu Asn Ala Gln Ala Gln Gln
        130   135   140

Thr Thr Leu Ser Leu Ala Ile Phe
145   150

<210> 2443
<211> 1038
<212> PRT
<213> Homo sapiens

<400> 2443

Met Phe Pro Thr Glu Ser Ala Trp Leu Gly Lys Arg Gly Ala Asn Pro
1   5   10   15

Gly Pro Glu Ala Ala Val Arg Glu Thr Val Met Leu Leu Leu Cys Leu
        20   25   30

Gly Val Pro Thr Gly Arg Pro Tyr Asn Val Asp Thr Glu Ser Ala Leu
        35   40   45

Leu Tyr Gln Gly Pro His Asn Thr Leu Phe Gly Tyr Ser Val Val Leu
    50   55   60

His Ser His Gly Ala Asn Arg Trp Leu Leu Val Gly Ala Pro Thr Ala
65   70   75   80

Asn Trp Leu Ala Asn Ala Ser Val Ile Asn Pro Gly Ala Ile Tyr Arg
            85   90   95

Cys Arg Ile Gly Lys Asn Pro Gly Gln Thr Cys Glu Gln Leu Gln Leu
        100   105   110

Gly Ser Pro Asn Gly Glu Pro Cys Gly Lys Thr Cys Leu Glu Glu Arg
        115   120   125

Asp Asn Gln Trp Leu Gly Val Thr Leu Ser Arg Gln Pro Gly Glu Asn
    130   135   140

Gly Ser Ile Val Thr Cys Gly His Arg Trp Lys Asn Ile Phe Tyr Ile
145   150   155   160

Lys Asn Glu Asn Lys Leu Pro Thr Gly Gly Cys Tyr Gly Val Pro Pro
            165   170   175

Asp Leu Arg Thr Glu Leu Ser Lys Arg Ile Ala Pro Cys Tyr Gln Asp
        180   185   190

Tyr Val Lys Lys Phe Gly Glu Asn Phe Ala Ser Cys Gln Ala Gly Ile
        195   200   205

Ser Ser Phe Tyr Thr Lys Asp Leu Ile Val Met Gly Ala Pro Gly Ser
210   215   220

Ser Tyr Trp Thr Gly Ser Leu Phe Val Tyr Asn Ile Thr Thr Asn Lys
225   230   235   240

Tyr Lys Ala Phe Leu Asp Lys Gln Asn Gln Val Lys Phe Gly Ser Tyr
            245   250   255

753

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Leu Gly Tyr Ser Val Gly Ala Gly His Phe Arg Ser Gln His Thr Thr
            260             265             270

Glu Val Val Gly Gly Ala Pro Gln His Glu Gln Ile Gly Lys Ala Tyr
            275             280             285

Ile Phe Ser Ile Asp Glu Lys Glu Leu Asn Ile Leu His Glu Met Lys
    290             295             300

Gly Lys Lys Leu Gly Ser Tyr Phe Gly Ala Ser Val Cys Ala Val Asp
305             310             315             320

Leu Asn Ala Asp Gly Phe Ser Asp Leu Leu Val Gly Ala Pro Met Gln
            325             330             335

Ser Thr Ile Arg Glu Glu Gly Arg Val Phe Val Tyr Ile Asn Ser Gly
            340             345             350

Ser Gly Ala Val Met Asn Ala Met Glu Thr Asn Leu Val Gly Ser Asp
            355             360             365

Lys Tyr Ala Ala Arg Phe Gly Glu Ser Ile Val Asn Leu Gly Asp Ile
    370             375             380

Asp Asn Asp Gly Phe Glu Asp Val Ala Ile Gly Ala Pro Gln Glu Asp
385             390             395             400

Asp Leu Gln Gly Ala Ile Tyr Ile Tyr Asn Gly Arg Ala Asp Gly Ile
            405             410             415

Ser Ser Thr Phe Ser Gln Arg Ile Glu Gly Leu Gln Ile Ser Lys Ser
            420             425             430

Leu Ser Met Phe Gly Gln Ser Ile Ser Gly Gln Ile Asp Ala Asp Asn
            435             440             445

Asn Gly Tyr Val Asp Val Ala Val Gly Ala Phe Arg Ser Asp Ser Ala
    450             455             460

Val Leu Leu Arg Thr Arg Pro Val Val Ile Val Asp Ala Ser Leu Ser
465             470             475             480

His Pro Glu Ser Val Asn Arg Thr Lys Phe Asp Cys Val Glu Asn Gly
            485             490             495
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754

```
Trp Pro Ser Val Cys Ile Asp Leu Thr Leu Cys Phe Ser Tyr Lys Gly
        500              505                 510

Lys Glu Val Pro Gly Tyr Ile Val Leu Phe Tyr Asn Met Ser Leu Asp
        515              520                 525

Val Asn Arg Lys Ala Glu Ser Pro Pro Arg Phe Tyr Phe Ser Ser Asn
    530                  535                 540

Gly Thr Ser Asp Val Ile Thr Gly Ser Ile Gln Val Ser Ser Arg Glu
545                  550                 555                 560

Ala Asn Cys Arg Thr His Gln Ala Phe Met Arg Lys Asp Val Arg Asp
            565                 570                 575

Ile Leu Thr Pro Ile Gln Ile Glu Ala Ala Tyr His Leu Gly Pro His
            580                 585                 590

Val Ile Ser Lys Arg Ser Thr Glu Glu Phe Pro Pro Leu Gln Pro Ile
        595                 600                 605

Leu Gln Gln Lys Lys Glu Lys Asp Ile Met Lys Lys Thr Ile Asn Phe
    610                  615                 620

Ala Arg Phe Cys Ala His Glu Asn Cys Ser Ala Asp Leu Gln Val Ser
625                  630                 635                 640

Ala Lys Ile Gly Phe Leu Lys Pro His Glu Asn Lys Thr Tyr Leu Ala
            645                 650                 655

Val Gly Ser Met Lys Thr Leu Met Leu Asn Val Ser Leu Phe Asn Ala
            660                 665                 670

Gly Asp Asp Ala Tyr Glu Thr Thr Leu His Val Lys Leu Pro Val Gly
        675                 680                 685

Leu Tyr Phe Ile Lys Ile Leu Glu Leu Glu Glu Lys Gln Ile Asn Cys
    690                  695                 700

Glu Val Thr Asp Asn Ser Gly Val Val Gln Leu Asp Cys Ser Ile Gly
705                  710                 715                 720

Tyr Ile Tyr Val Asp His Leu Ser Arg Ile Asp Ile Ser Phe Leu Leu
            725                 730                 735

Asp Val Ser Ser Leu Ser Arg Ala Glu Glu Asp Leu Ser Ile Thr Val
```

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                740                    745              .           750


His Ala Thr Cys Glu Asn Glu Glu Glu Met Asp Asn Leu Lys His Ser
        755                760                765

Arg Val Thr Val Ala Ile Pro Leu Lys Tyr Glu Val Lys Leu Thr Val
    770                775                780

His Gly Phe Val Asn Pro Thr Ser Phe Val Tyr Gly Ser Asn Asp Glu
785                790                795                800

Asn Glu Pro Glu Thr Cys Met Val Glu Lys Met Asn Leu Thr Phe His
            805                810                815

Val Ile Asn Thr Gly Asn Ser Met Ala Pro Asn Val Ser Val Glu Ile
            820                825                830

Met Val Pro Asn Ser Phe Ser Pro Gln Thr Asp Lys Leu Phe Asn Ile
        835                840                845

Leu Asp Val Gln Thr Thr Thr Gly Glu Cys His Phe Glu Asn Tyr Gln
    850                855                860

Arg Val Cys Ala Leu Glu Gln Gln Lys Ser Ala Met Gln Thr Leu Lys
865                870                875                880

Gly Ile Val Arg Phe Leu Ser Lys Thr Asp Lys Arg Leu Leu Tyr Cys
            885                890                895

Ile Lys Ala Asp Pro His Cys Leu Asn Phe Leu Cys Asn Phe Gly Lys
        900                905                910

Met Glu Ser Gly Lys Glu Ala Ser Val His Ile Gln Leu Glu Gly Arg
        915                920                925

Pro Ser Ile Leu Glu Met Asp Glu Thr Ser Ala Leu Lys Phe Glu Ile
    930                935                940

Arg Ala Thr Gly Phe Pro Glu Pro Asn Pro Arg Val Ile Glu Leu Asn
945                950                955                960

Lys Asp Glu Asn Val Ala His Val Leu Leu Glu Gly Leu His His Gln
            965                970                975

Arg Pro Lys Arg Tyr Phe Thr Ile Val Ile Ile Ser Ser Ser Leu Leu
        980                985                990
```

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Leu Gly Leu Ile Val Leu Leu Leu  Ile Ser Tyr Val Met  Trp Lys Ala
        995                 1000                1005


Gly Phe  Phe Lys Arg Gln Tyr  Lys Ser Ile Leu Gln  Glu Glu Asn
    1010                 1015                1020


Arg Arg  Asp Ser Trp Ser Tyr  Ile Asn Ser Lys Ser  Asn Asp Asp
    1025                 1030                1035



<210>  2444
<211>  1152
<212>  PRT
<213>  Homo sapiens

<400>  2444

Met Ala Leu Arg Val Leu Leu Leu Thr Ala Leu Thr Leu Cys His Gly
1             5             10             15


Phe Asn Leu Asp Thr Glu Asn Ala Met Thr Phe Gln Glu Asn Ala Arg
            20             25             30


Gly Phe Gly Gln Ser Val Val Gln Leu Gln Gly Ser Arg Val Val Val
        35             40             45


Gly Ala Pro Gln Glu Ile Val Ala Ala Asn Gln Arg Gly Ser Leu Tyr
    50             55             60


Gln Cys Asp Tyr Ser Thr Gly Ser Cys Glu Pro Ile Arg Leu Gln Val
65             70             75             80


Pro Val Glu Ala Val Asn Met Ser Leu Gly Leu Ser Leu Ala Ala Thr
            85             90             95


Thr Ser Pro Pro Gln Leu Leu Ala Cys Gly Pro Thr Val His Gln Thr
        100            105            110


Cys Ser Glu Asn Thr Tyr Val Lys Gly Leu Cys Phe Leu Phe Gly Ser
        115            120            125


Asn Leu Arg Gln Gln Pro Gln Lys Phe Pro Glu Ala Leu Arg Gly Cys
    130            135            140


Pro Gln Glu Asp Ser Asp Ile Ala Phe Leu Ile Asp Gly Ser Gly Ser
145            150            155            160
```

Ile Ile Pro His Asp Phe Arg Arg Met Lys Glu Phe Val Ser Thr Val
                165   170   175

Met Glu Gln Leu Lys Lys Ser Lys Thr Leu Phe Ser Leu Met Gln Tyr
                180   185   190

Ser Glu Glu Phe Arg Ile His Phe Thr Phe Lys Glu Phe Gln Asn Asn
                195   200   205

Pro Asn Pro Arg Ser Leu Val Lys Pro Ile Thr Gln Leu Leu Gly Arg
    210   215   220

Thr His Thr Ala Thr Gly Ile Arg Lys Val Val Arg Glu Leu Phe Asn
225   230   235   240

Ile Thr Asn Gly Ala Arg Lys Asn Ala Phe Lys Ile Leu Val Val Ile
                245   250   255

Thr Asp Gly Glu Lys Phe Gly Asp Pro Leu Gly Tyr Glu Asp Val Ile
                260   265   270

Pro Glu Ala Asp Arg Glu Gly Val Ile Arg Tyr Val Ile Gly Val Gly
    275   280   285

Asp Ala Phe Arg Ser Glu Lys Ser Arg Gln Glu Leu Asn Thr Ile Ala
    290   295   300

Ser Lys Pro Pro Arg Asp His Val Phe Gln Val Asn Asn Phe Glu Ala
305   310   315   320

Leu Lys Thr Ile Gln Asn Gln Leu Arg Glu Lys Ile Phe Ala Ile Glu
                325   330   335

Gly Thr Gln Thr Gly Ser Ser Ser Ser Phe Glu His Glu Met Ser Gln
                340   345   350

Glu Gly Phe Ser Ala Ala Ile Thr Ser Asn Gly Pro Leu Leu Ser Thr
                355   360   365

Val Gly Ser Tyr Asp Trp Ala Gly Gly Val Phe Leu Tyr Thr Ser Lys
    370   375   380

Glu Lys Ser Thr Phe Ile Asn Met Thr Arg Val Asp Ser Asp Met Asn
385   390   395   400

Asp Ala Tyr Leu Gly Tyr Ala Ala Ala Ile Ile Leu Arg Asn Arg Val

```
                 405                    410                    415


Gln Ser Leu Val Leu Gly Ala Pro Arg Tyr Gln His Ile Gly Leu Val
        420              425              430


Ala Met Phe Arg Gln Asn Thr Gly Met Trp Glu Ser Asn Ala Asn Val
        435              440              445


Lys Gly Thr Gln Ile Gly Ala Tyr Phe Gly Ala Ser Leu Cys Ser Val
        450              455              460


Asp Val Asp Ser Asn Gly Ser Thr Asp Leu Val Leu Ile Gly Ala Pro
465              470              475              480


His Tyr Tyr Glu Gln Thr Arg Gly Gly Gln Val Ser Val Cys Pro Leu
                485              490              495


Pro Arg Gly Arg Ala Arg Trp Gln Cys Asp Ala Val Leu Tyr Gly Glu
        500              505              510


Gln Gly Gln Pro Trp Gly Arg Phe Gly Ala Ala Leu Thr Val Leu Gly
        515              520              525


Asp Val Asn Gly Asp Lys Leu Thr Asp Val Ala Ile Gly Ala Pro Gly
        530              535              540


Glu Glu Asp Asn Arg Gly Ala Val Tyr Leu Phe His Gly Thr Ser Gly
545              550              555              560


Ser Gly Ile Ser Pro Ser His Ser Gln Arg Ile Ala Gly Ser Lys Leu
                565              570              575


Ser Pro Arg Leu Gln Tyr Phe Gly Gln Ser Leu Ser Gly Gly Gln Asp
        580              585              590


Leu Thr Met Asp Gly Leu Val Asp Leu Thr Val Gly Ala Gln Gly His
        595              600              605


Val Leu Leu Leu Arg Ser Gln Pro Val Leu Arg Val Lys Ala Ile Met
        610              615              620


Glu Phe Asn Pro Arg Glu Val Ala Arg Asn Val Phe Glu Cys Asn Asp
625              630                635              640


Gln Val Val Lys Gly Lys Glu Ala Gly Glu Val Arg Val Cys Leu His
                645              650              655
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Val Gln Lys Ser Thr Arg Asp Arg Leu Arg Glu Gly Gln Ile Gln Ser
        660   665   670

Val Val Thr Tyr Asp Leu Ala Leu Asp Ser Gly Arg Pro His Ser Arg
        675   680   685

Ala Val Phe Asn Glu Thr Lys Asn Ser Thr Arg Arg Gln Thr Gln Val
        690   695   700

Leu Gly Leu Thr Gln Thr Cys Glu Thr Leu Lys Leu Gln Leu Pro Asn
705   710   715   720

Cys Ile Glu Asp Pro Val Ser Pro Ile Val Leu Arg Leu Asn Phe Ser
                725   730   735

Leu Val Gly Thr Pro Leu Ser Ala Phe Gly Asn Leu Arg Pro Val Leu
        740   745   750

Ala Glu Asp Ala Gln Arg Leu Phe Thr Ala Leu Phe Pro Phe Glu Lys
        755   760   765

Asn Cys Gly Asn Asp Asn Ile Cys Gln Asp Asp Leu Ser Ile Thr Phe
        770   775   780

Ser Phe Met Ser Leu Asp Cys Leu Val Val Gly Gly Pro Arg Glu Phe
785   790   795   800

Asn Val Thr Val Thr Val Arg Asn Asp Gly Glu Asp Ser Tyr Arg Thr
                805   810   815

Gln Val Thr Phe Phe Phe Pro Leu Asp Leu Ser Tyr Arg Lys Val Ser
                820   825   830

Thr Leu Gln Asn Gln Arg Ser Gln Arg Ser Trp Arg Leu Ala Cys Glu
        835   840   845

Ser Ala Ser Ser Thr Glu Val Ser Gly Ala Leu Lys Ser Thr Ser Cys
        850   855   860

Ser Ile Asn His Pro Ile Phe Pro Glu Asn Ser Glu Val Thr Phe Asn
865   870   875   880

Ile Thr Phe Asp Val Asp Ser Lys Ala Ser Leu Gly Asn Lys Leu Leu
                885   890   895

760

Leu Lys Ala Asn Val Thr Ser Glu Asn Asn Met Pro Arg Thr Asn Lys
        900   905   910

Thr Glu Phe Gln Leu Glu Leu Pro Val Lys Tyr Ala Val Tyr Met Val
        915   920   925

Val Thr Ser His Gly Val Ser Thr Lys Tyr Leu Asn Phe Thr Ala Ser
    930   935   940

Glu Asn Thr Ser Arg Val Met Gln His Gln Tyr Gln Val Ser Asn Leu
945   950   955   960

Gly Gln Arg Ser Pro Pro Ile Ser Leu Val Phe Leu Val Pro Val Arg
            965   970   975

Leu Asn Gln Thr Val Ile Trp Asp Arg Pro Gln Val Thr Phe Ser Glu
        980   985   990

Asn Leu Ser Ser Thr Cys His Thr Lys Glu Arg Leu Pro Ser His Ser
        995   1000   1005

Asp Phe Leu Ala Glu Leu Arg Lys Ala Pro Val Val Asn Cys Ser
    1010   1015   1020

Ile Ala Val Cys Gln Arg Ile Gln Cys Asp Ile Pro Phe Phe Gly
    1025   1030   1035

Ile Gln Glu Glu Phe Asn Ala Thr Leu Lys Gly Asn Leu Ser Phe
    1040   1045   1050

Asp Trp Tyr Ile Lys Thr Ser His Asn His Leu Leu Ile Val Ser
    1055   1060   1065

Thr Ala Glu Ile Leu Phe Asn Asp Ser Val Phe Thr Leu Leu Pro
    1070   1075   1080

Gly Gln Gly Ala Phe Val Arg Ser Gln Thr Glu Thr Lys Val Glu
    1085   1090   1095

Pro Phe Glu Val Pro Asn Pro Leu Pro Leu Ile Val Gly Ser Ser
    1100   1105   1110

Val Gly Gly Leu Leu Leu Leu Ala Leu Ile Thr Ala Ala Leu Tyr
    1115   1120   1125

761

Lys Leu Gly Phe Phe Lys Arg Gln Tyr Lys Asp Met Met Ser Glu
    1130   1135   1140

Gly Gly Pro Pro Gly Ala Glu Pro Gln
    1145   1150

<210> 2445.
<211> 798
<212> PRT
<213> Homo sapiens

<400> 2445

Met Val Ala Leu Pro Met Val Leu Val Leu Leu Leu Val Leu Ser Arg
1   5   10   15

Gly Glu Ser Glu Leu Asp Ala Lys Ile Pro Ser Thr Gly Asp Ala Thr
            20   25   30

Glu Trp Arg Asn Pro His Leu Ser Met Leu Gly Ser Cys Gln Pro Ala
            35   40   45

Pro Ser Cys Gln Lys Cys Ile Leu Ser His Pro Ser Cys Ala Trp Cys
    50   55   60

Lys Gln Leu Asn Phe Thr Ala Ser Gly Glu Ala Glu Ala Arg Arg Cys
65   70   75   80

Ala Arg Arg Glu Glu Leu Leu Ala Arg Gly Cys Pro Leu Glu Glu Leu
            85   90   95

Glu Glu Pro Arg Gly Gln Gln Glu Val Leu Gln Asp Gln Pro Leu Ser
            100   105   110

Gln Gly Ala Arg Gly Glu Gly Ala Thr Gln Leu Ala Pro Gln Arg Val
            115   120   125

Arg Val Thr Leu Arg Pro Gly Glu Pro Gln Gln Leu Gln Val Arg Phe
    130   135   140

Leu Arg Ala Glu Gly Tyr Pro Val Asp Leu Tyr Tyr Leu Met Asp Leu
145   150   155   160

Ser Tyr Ser Met Lys Asp Asp Leu Glu Arg Val Arg Gln Leu Gly His
                165   170   175

Ala Leu Leu Val Arg Leu Gln Glu Val Thr His Ser Val Arg Ile Gly
            180   185   190

```
Phe Gly Ser Phe Val Asp Lys Thr Val Leu Pro Phe Val Ser Thr Val
        195             200             205

Pro Ser Lys Leu Arg His Pro Cys Pro Thr Arg Leu Glu Arg Cys Gln
    210             215             220

Ser Pro Phe Ser Phe His His Val Leu Ser Leu Thr Gly Asp Ala Gln
225             230                 235             240

Ala Phe Glu Arg Glu Val Gly Arg Gln Ser Val Ser Gly Asn Leu Asp
            245             250             255

Ser Pro Glu Gly Gly Phe Asp Ala Ile Leu Gln Ala Ala Leu Cys Gln
        260             265             270

Glu Gln Ile Gly Trp Arg Asn Val Ser Arg Leu Leu Val Phe Thr Ser
        275             280             285

Asp Asp Thr Phe His Thr Ala Gly Asp Gly Lys Leu Gly Gly Ile Phe
    290             295             300

Met Pro Ser Asp Gly His Cys His Leu Asp Ser Asn Gly Leu Tyr Ser
305             310             315             320

Arg Ser Thr Glu Phe Asp Tyr Pro Ser Val Gly Gln Val Ala Gln Ala
            325             330             335

Leu Ser Ala Ala Asn Ile Gln Pro Ile Phe Ala Val Thr Ser Ala Ala
        340             345             350

Leu Pro Val Tyr Gln Glu Leu Ser Lys Leu Ile Pro Lys Ser Ala Val
        355             360             365

Gly Glu Leu Ser Glu Asp Ser Ser Asn Val Val Gln Leu Ile Met Asp
    370             375             380

Ala Tyr Asn Ser Leu Ser Ser Thr Val Thr Leu Glu His Ser Ser Leu
385             390             395             400

Pro Pro Gly Val His Ile Ser Tyr Glu Ser Gln Cys Glu Gly Pro Glu
            405             410             415

Lys Arg Glu Gly Lys Ala Glu Asp Arg Gly Gln Cys Asn His Val Arg
    420             425             430
```

763

Ile Asn Gln Thr Val Thr Phe Trp Val Ser Leu Gln Ala Thr His Cys
        435   440   445

Leu Pro Glu Pro His Leu Leu Arg Leu Arg Ala Leu Gly Phe Ser Glu
        450   455   460

Glu Leu Ile Val Glu Leu His Thr Leu Cys Asp Cys Asn Cys Ser Asp
465   470   475   480

Thr Gln Pro Gln Ala Pro His Cys Ser Asp Gly Gln Gly His Leu Gln
                485   490   495

Cys Gly Val Cys Ser Cys Ala Pro Gly Arg Leu Gly Arg Leu Cys Glu
            500   505   510

Cys Ser Val Ala Glu Leu Ser Ser Pro Asp Leu Glu Ser Gly Cys Arg
            515   520   525

Ala Pro Asn Gly Thr Gly Pro Leu Cys Ser Gly Lys Gly His Cys Gln
        530   535   540

Cys Gly Arg Cys Ser Cys Ser Gly Gln Ser Ser Gly His Leu Cys Glu
545   550   555   560

Cys Asp Asp Ala Ser Cys Glu Arg His Glu Gly Ile Leu Cys Gly Gly
                565   570   575

Phe Gly Arg Cys Gln Cys Gly Val Cys His Cys His Ala Asn Arg Thr
            580   585   590

Gly Arg Ala Cys Glu Cys Ser Gly Asp Met Asp Ser Cys Ile Ser Pro
        595   600   605

Glu Gly Gly Leu Cys Ser Gly His Gly Arg Cys Lys Cys Asn Arg Cys
        610   615   620

Gln Cys Leu Asp Gly Tyr Tyr Gly Ala Leu Cys Asp Gln Cys Pro Gly
625   630   635   640

Cys Lys Thr Pro Cys Glu Arg His Arg Asp Cys Ala Glu Cys Gly Ala
                645   650   655

Phe Arg Thr Gly Pro Leu Ala Thr Asn Cys Ser Thr Ala Cys Ala His
        660   665   670

764

```
Thr Asn Val Thr Leu Ala Leu Ala Pro Ile Leu Asp Asp Gly Trp Cys
        675                 680                 685


Lys Glu Arg Thr Leu Asp Asn Gln Leu Phe Phe Phe Leu Val Glu Asp
        690                 695                 700


Asp Ala Arg Gly Thr Val Val Leu Arg Val Arg Pro Gln Glu Lys Gly
705                 710                 715                 720


Ala Asp His Thr Gln Ala Ile Val Leu Gly Cys Val Gly Gly Ile Val
                725                 730                 735


Ala Val Gly Leu Gly Leu Val Leu Ala Tyr Arg Leu Ser Val Glu Ile
            740                 745                 750


Tyr Asp Arg Arg Glu Tyr Ser Arg Phe Glu Lys Glu Gln Gln Gln Leu
        755                 760                 765


Asn Trp Lys Gln Asp Ser Asn Pro Leu Tyr Lys Ser Ala Ile Thr Thr
    770                 775                 780


Thr Ile Asn Pro Arg Phe Gln Glu Ala Asp Ser Pro Thr Leu
785                 790                 795


<210>   2446
<211>   345
<212>   PRT
<213>   Homo sapiens


<400>   2446

Met Gln Arg Leu Val Ala Trp Asp Pro Ala Cys Leu Pro Leu Pro Pro
1                   5                   10                  15


Pro Pro Pro Ala Phe Lys Ser Met Glu Val Ala Asn Phe Tyr Tyr Glu
            20                  25                  30


Ala Asp Cys Leu Ala Ala Ala Tyr Gly Gly Lys Ala Ala Pro Ala Ala
            35                  40                  45


Pro Pro Ala Ala Arg Pro Gly Pro Arg Pro Pro Ala Gly Glu Leu Gly
    50                  55                  60


Ser Ile Gly Asp His Glu Arg Ala Ile Asp Phe Ser Pro Tyr Leu Glu
65                  70                  75                  80


Pro Leu Gly Ala Pro Gln Ala Pro Ala Pro Ala Thr Ala Thr Asp Thr
                85                  90                  95
```

Phe Glu Ala Ala Pro Pro Ala Pro Ala Pro Ala Pro Ala Ser Ser Gly
            100   105   110

Gln His His Asp Phe Leu Ser Asp Leu Phe Ser Asp Asp Tyr Gly Gly
            115   120   125

Lys Asn Cys Lys Lys Pro Ala Glu Tyr Gly Tyr Val Ser Leu Gly Arg
    130   135   140

Leu Gly Ala Ala Lys Gly Ala Leu His Pro Gly Cys Phe Ala Pro Leu
145   150   155   160

His Pro Pro Pro Pro Pro Pro Pro Pro Ala Glu Leu Lys Ala Glu
            165   170   175

Pro Gly Phe Glu Pro Ala Asp Cys Lys Arg Lys Glu Glu Ala Gly Ala
            180   185   190

Pro Gly Gly Gly Ala Gly Met Ala Ala Gly Phe Pro Tyr Ala Leu Arg
            195   200   205

Ala Tyr Leu Gly Tyr Gln Ala Val Pro Ser Gly Ser Ser Gly Ser Leu
    210   215   220

Ser Thr Ser Ser Ser Ser Ser Pro Pro Gly Thr Pro Ser Pro Ala Asp
225   230   235   240

Ala Lys Ala Pro Pro Thr Ala Cys Tyr Ala Gly Ala Ala Pro Ala Pro
            245   250   255

Ser Gln Val Lys Ser Lys Ala Lys Lys Thr Val Asp Lys His Ser Asp
            260   265   270

Glu Tyr Lys Ile Arg Arg Glu Arg Asn Asn Ile Ala Val Arg Lys Ser
            275   280   285

Arg Asp Lys Ala Lys Met Arg Asn Leu Glu Thr Gln His Lys Val Leu
            290   295   300

Glu Leu Thr Ala Glu Asn Glu Arg Leu Gln Lys Lys Val Glu Gln Leu
305   310   315   320

Ser Arg Glu Leu Ser Thr Leu Arg Asn Leu Phe Lys Gln Leu Pro Glu
            325   330   335

```
Pro Leu Leu Ala Ser Ser Gly His Cys
            340                 345


<210>   2447
<211>   373
<212>   PRT
<213>   Homo sapiens

<400>   2447

Met Ser Pro Cys Pro Pro Gln Gln Ser Arg Asn Arg Val Ile Gln Leu
1               5                   10                  15


Ser Thr Ser Glu Leu Gly Glu Met Glu Leu Thr Trp Gln Glu Ile Met
            20                  25                  30


Ser Ile Thr Glu Leu Gln Gly Leu Asn Ala Pro Ser Glu Pro Ser Phe
            35                  40                  45


Glu Pro Gln Ala Pro Ala Pro Tyr Leu Gly Pro Pro Pro Pro Thr Thr
        50                  55                  60


Tyr Cys Pro Cys Ser Ile His Pro Asp Ser Gly Phe Pro Leu Pro Pro
65                  70                  75                  80


Pro Pro Tyr Glu Leu Pro Ala Ser Thr Ser His Val Pro Asp Pro Pro
            85                  90                  95


Tyr Ser Tyr Gly Asn Met Ala Ile Pro Val Ser Lys Pro Leu Ser Leu
            100                 105                 110


Ser Gly Leu Leu Ser Glu Pro Leu Gln Asp Pro Leu Ala Leu Leu Asp
            115                 120                 125


Ile Gly Leu Pro Ala Gly Pro Pro Lys Pro Gln Glu Asp Pro Glu Ser
    130                 135                 140


Asp Ser Gly Leu Ser Leu Asn Tyr Ser Asp Ala Glu Ser Leu Glu Leu
145                 150                 155                 160


Glu Gly Thr Glu Ala Gly Arg Arg Arg Ser Glu Tyr Val Glu Met Tyr
                165                 170                 175


Pro Val Glu Tyr Pro Tyr Ser Leu Met Pro Asn Ser Leu Ala His Ser
            180                 185                 190


Asn Tyr Thr Leu Pro Ala Ala Glu Thr Pro Leu Ala Leu Glu Pro Ser
```

```
            195                    200                         205


Ser Gly Pro Val Arg Ala Lys Pro Thr Ala Arg Gly Glu Ala Gly Ser
    210             215                 220

Arg Asp Glu Arg Arg Ala Leu Ala Met Lys Ile Pro Phe Pro Thr Asp
225             230                 235                 240

Lys Ile Val Asn Leu Pro Val Asp Asp Phe Asn Glu Leu Leu Ala Arg
                245                 250                 255

Tyr Pro Leu Thr Glu Ser Gln Leu Ala Leu Val Arg Asp Ile Arg Arg
                260             265                 270

Arg Gly Lys Asn Lys Val Ala Ala Gln Asn Cys Arg Lys Arg Lys Leu
            275                 280                 285

Glu Thr Ile Val Gln Leu Glu Arg Glu Leu Glu Arg Leu Thr Asn Glu
    290                 295                 300

Arg Glu Arg Leu Leu Arg Ala Arg Gly Glu Ala Asp Arg Thr Leu Glu
305                 310                 315                 320

Val Met Arg Gln Gln Leu Thr Glu Leu Tyr Arg Asp Ile Phe Gln His
                325                 330                 335

Leu Arg Asp Glu Ser Gly Asn Ser Tyr Ser Pro Glu Glu Tyr Ala Leu
                340                 345                 350

Gln Gln Ala Ala Asp Gly Thr Ile Phe Leu Val Pro Arg Gly Thr Lys
            355                 360                 365

Met Glu Ala Thr Asp
    370


<210>  2448
<211>  288
<212>  PRT
<213>  Homo sapiens

<400>  2448

Met Gln Ile Pro Gln Ala Pro Trp Pro Val Val Trp Ala Val Leu Gln
1               5                   10                  15

Leu Gly Trp Arg Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro Trp
            20                  25                  30
```

Asn Pro Pro Thr Phe Phe Pro Ala Leu Leu Val Val Thr Glu Gly Asp
        35   40   45

Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val
    50   55   60

Leu Asn Trp Tyr Arg Met Ser Pro Ser Asn Gln Thr Asp Lys Leu Ala
65   70   75   80

Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg
            85   90   95

Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg
            100   105   110

Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu
        115   120   125

Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val
    130   135   140

Thr Glu Arg Arg Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro
145   150   155   160

Arg Pro Ala Gly Gln Phe Gln Thr Leu Val Val Gly Val Val Gly Gly
            165   170   175

Leu Leu Gly Ser Leu Val Leu Leu Val Trp Val Leu Ala Val Ile Cys
        180   185   190

Ser Arg Ala Ala Arg Gly Thr Ile Gly Ala Arg Arg Thr Gly Gln Pro
        195   200   205

Leu Lys Glu Asp Pro Ser Ala Val Pro Val Phe Ser Val Asp Tyr Gly
    210   215   220

Glu Leu Asp Phe Gln Trp Arg Glu Lys Thr Pro Glu Pro Pro Val Pro
225   230   235   240

Cys Val Pro Glu Gln Thr Glu Tyr Ala Thr Ile Val Phe Pro Ser Gly
            245   250   255

Met Gly Thr Ser Ser Pro Ala Arg Arg Gly Ser Ala Asp Gly Pro Arg
        260   265   270

769

Ser Ala Gln Pro Leu Arg Pro Glu Asp Gly His Cys Ser Trp Pro Leu
        275   280   285

<210> 2449
<211> 101
<212> PRT
<213> Homo sapiens

<400> 2449

Met Ser Ser Ala Ala Gly Phe Cys Ala Ser Arg Pro Gly Leu Leu Phe
1   5   10   15

Leu Gly Leu Leu Leu Leu Pro Leu Val Val Ala Phe Ala Ser Ala Glu
        20   25   30

Ala Glu Glu Asp Gly Asp Leu Gln Cys Leu Cys Val Lys Thr Thr Ser
        35   40   45

Gln Val Arg Pro Arg His Ile Thr Ser Leu Glu Val Ile Lys Ala Gly
    50   55   60

Pro His Cys Pro Thr Ala Gln Leu Ile Ala Thr Leu Lys Asn Gly Arg
65   70   75   80

Lys Ile Cys Leu Asp Leu Gln Ala Pro Leu Tyr Lys Lys Ile Ile Lys
                85   90   95

Lys Leu Leu Glu Ser
            100

<210> 2450
<211> 706
<212> PRT
<213> Homo sapiens

<400> 2450

Met Ser Pro Phe Leu Arg Ile Gly Leu Ser Asn Phe Asp Cys Gly Ser
1   5   10   15

Cys Gln Ser Cys Gln Gly Glu Ala Val Asn Pro Tyr Cys Ala Val Leu
        20   25   30

Val Lys Glu Tyr Val Glu Ser Glu Asn Gly Gln Met Tyr Ile Gln Lys
        35   40   45

Lys Pro Thr Met Tyr Pro Pro Trp Asp Ser Thr Phe Asp Ala His Ile
    50   55   60

770

Asn Lys Gly Arg Val Met Gln Ile Ile Val Lys Gly Lys Asn Val Asp
65   70   75   80

Leu Ile Ser Glu Thr Thr Val Glu Leu Tyr Ser Leu Ala Glu Arg Cys
85   90   95

Arg Lys Asn Asn Gly Lys Thr Glu Ile Trp Leu Glu Leu Lys Pro Gln
100   105   110

Gly Arg Met Leu Met Asn Ala Arg Tyr Phe Leu Glu Met Ser Asp Thr
115   120   125

Lys Asp Met Asn Glu Phe Glu Thr Glu Gly Phe Phe Ala Leu His Gln
130   135   140

Arg Arg Gly Ala Ile Lys Gln Ala Lys Val His His Val Lys Cys His
145   150   155   160

Glu Phe Thr Ala Thr Phe Phe Pro Gln Pro Thr Phe Cys Ser Val Cys
165   170   175

His Glu Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Gln Cys Arg Gln
180   185   190

Cys Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Val Ile Ala Lys
195   200   205

Cys Thr Gly Ser Ala Ile Asn Ser Arg Glu Thr Met Phe His Lys Glu
210   215   220

Arg Phe Lys Ile Asp Met Pro His Arg Phe Lys Val Tyr Asn Tyr Lys
225   230   235   240

Ser Pro Thr Phe Cys Glu His Cys Gly Thr Leu Leu Trp Gly Leu Ala
245   250   255

Arg Gln Gly Leu Lys Cys Asp Ala Cys Gly Met Asn Val His His Arg
260   265   270

Cys Gln Thr Lys Val Ala Asn Leu Cys Gly Ile Asn Gln Lys Leu Met
275   280   285

Ala Glu Ala Leu Ala Met Ile Glu Ser Thr Gln Gln Ala Arg Cys Leu
290   295   300

771

Arg Asp Thr Glu Gln Ile Phe Arg Glu Gly Pro Val Glu Ile Gly Leu
305   310   315   320

Pro Cys Ser Ile Lys Asn Glu Ala Arg Pro Pro Cys Leu Pro Thr Pro
                325   330   335

Gly Lys Arg Glu Pro Gln Gly Ile Ser Trp Glu Ser Pro Leu Asp Glu
                340   345   350

Val Asp Lys Met Cys His Leu Pro Glu Pro Glu Leu Asn Lys Glu Arg
                355   360   365

Pro Ser Leu Gln Ile Lys Leu Lys Ile Glu Asp Phe Ile Leu His Lys
    370   375   380

Met Leu Gly Lys Gly Ser Phe Gly Lys Val Phe Leu Ala Glu Phe Lys
385   390   395   400

Lys Thr Asn Gln Phe Phe Ala Ile Lys Ala Leu Lys Lys Asp Val Val
                405   410   415

Leu Met Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val Leu
                420   425   430

Ser Leu Ala Trp Glu His Pro Phe Leu Thr His Met Phe Cys Thr Phe
    435   440   445

Gln Thr Lys Glu Asn Leu Phe Phe Val Met Glu Tyr Leu Asn Gly Gly
    450   455   460

Asp Leu Met Tyr His Ile Gln Ser Cys His Lys Phe Asp Leu Ser Arg
465   470   475   480

Ala Thr Phe Tyr Ala Ala Glu Ile Ile Leu Gly Leu Gln Phe Leu His
                485   490   495

Ser Lys Gly Ile Val Tyr Arg Asp Leu Lys Leu Asp Asn Ile Leu Leu
                500   505   510

Asp Lys Asp Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys Glu
                515   520   525

Asn Met Leu Gly Asp Ala Lys Thr Asn Thr Phe Cys Gly Thr Pro Asp
                530   535   540

Tyr Ile Ala Pro Glu Ile Leu Leu Gly Gln Lys Tyr Asn His Ser Val

772

```
545                    550                     555                     560
```

```
Asp Trp Trp Ser Phe Gly Val Leu Leu Tyr Glu Met Leu Ile Gly Gln
                 565                     570                     575
```

```
Ser Pro Phe His Gly Gln Asp Glu Glu Glu Leu Phe His Ser Ile Arg
                 580                     585                     590
```

```
Met Asp Asn Pro Phe Tyr Pro Arg Trp Leu Glu Lys Glu Ala Lys Asp
         595                     600                     605
```

```
Leu Leu Val Lys Leu Phe Val Arg Glu Pro Glu Lys Arg Leu Gly Val
     610                     615                     620
```

```
Arg Gly Asp Ile Arg Gln His Pro Leu Phe Arg Glu Ile Asn Trp Glu
625                     630                     635                     640
```

```
Glu Leu Glu Arg Lys Glu Ile Asp Pro Pro Phe Arg Pro Lys Val Lys
                 645                     650                     655
```

```
Ser Pro Phe Asp Cys Ser Asn Phe Asp Lys Glu Phe Leu Asn Glu Lys
                 660                     665                     670
```

```
Pro Arg Leu Ser Phe Ala Asp Arg Ala Leu Ile Asn Ser Met Asp Gln
                 675                     680                     685
```

```
Asn Met Phe Arg Asn Phe Ser Phe Met Asn Pro Gly Met Glu Arg Leu
         690                     695                     700
```

```
Ile Ser
705
```

```
<210>   2451
<211>   798
<212>   PRT
<213>   Homo sapiens
```

```
<400>   2451
```

```
Met Ala Trp Asp Met Cys Asn Gln Asp Ser Glu Ser Val Trp Ser Asp
1               5                       10                      15
```

```
Ile Glu Cys Ala Ala Leu Val Gly Glu Asp Gln Pro Leu Cys Pro Asp
             20                      25                      30
```

```
Leu Pro Glu Leu Asp Leu Ser Glu Leu Asp Val Asn Asp Leu Asp Thr
         35                      40                      45
```

```
Asp Ser Phe Leu Gly Gly Leu Lys Trp Cys Ser Asp Gln Ser Glu Ile
    50                  55                  60

Ile Ser Asn Gln Tyr Asn Asn Glu Pro Ser Asn Ile Phe Glu Lys Ile
65                  70                  75                  80

Asp Glu Glu Asn Glu Ala Asn Leu Leu Ala Val Leu Thr Glu Thr Leu
                85                  90                  95

Asp Ser Leu Pro Val Asp Glu Asp Gly Leu Pro Ser Phe Asp Ala Leu
                100                 105                 110

Thr Asp Gly Asp Val Thr Thr Asp Asn Glu Ala Ser Pro Ser Ser Met
        115                 120                 125

Pro Asp Gly Thr Pro Pro Pro Gln Glu Ala Glu Glu Pro Ser Leu Leu
    130                 135                 140

Lys Lys Leu Leu Leu Ala Pro Ala Asn Thr Gln Leu Ser Tyr Asn Glu
145                 150                 155                 160

Cys Ser Gly Leu Ser Thr Gln Asn His Ala Asn His Asn His Arg Ile
                165                 170                 175

Arg Thr Asn Pro Ala Ile Val Lys Thr Glu Asn Ser Trp Ser Asn Lys
                180                 185                 190

Ala Lys Ser Ile Cys Gln Gln Gln Lys Pro Gln Arg Arg Pro Cys Ser
        195                 200                 205

Glu Leu Leu Lys Tyr Leu Thr Thr Asn Asp Asp Pro Pro His Thr Lys
    210                 215                 220

Pro Thr Glu Asn Arg Asn Ser Ser Arg Asp Lys Cys Thr Ser Lys Lys
225                 230                 235                 240

Lys Ser His Thr Gln Ser Gln Ser Gln His Leu Gln Ala Lys Pro Thr
                245                 250                 255

Thr Leu Ser Leu Pro Leu Thr Pro Glu Ser Pro Asn Asp Pro Lys Gly
            260                 265                 270

Ser Pro Phe Glu Asn Lys Thr Ile Glu Arg Thr Leu Ser Val Glu Leu
            275                 280                 285
```

774

Ser Gly Thr Ala Gly Leu Thr Pro Pro Thr Thr Pro Pro His Lys Ala
290   295   300

Asn Gln Asp Asn Pro Phe Arg Ala Ser Pro Lys Leu Lys Ser Ser Cys
305   310   315   320

Lys Thr Val Val Pro Pro Pro Ser Lys Lys Pro Arg Tyr Ser Glu Ser
                325   330   335

Ser Gly Thr Gln Gly Asn Asn Ser Thr Lys Lys Gly Pro Glu Gln Ser
            340   345   350

Glu Leu Tyr Ala Gln Leu Ser Lys Ser Ser Val Leu Thr Gly Gly His
        355   360   365

Glu Glu Arg Lys Thr Lys Arg Pro Ser Leu Arg Leu Phe Gly Asp His
    370   375   380

Asp Tyr Cys Gln Ser Ile Asn Ser Lys Thr Glu Ile Leu Ile Asn Ile
385   390   395   400

Ser Gln Glu Leu Gln Asp Ser Arg Gln Leu Glu Asn Lys Asp Val Ser
            405   410   415

Ser Asp Trp Gln Gly Gln Ile Cys Ser Ser Thr Asp Ser Asp Gln Cys
            420   425   430

Tyr Leu Arg Glu Thr Leu Glu Ala Ser Lys Gln Val Ser Pro Cys Ser
        435   440   445

Thr Arg Lys Gln Leu Gln Asp Gln Glu Ile Arg Ala Glu Leu Asn Lys
    450   455   460

His Phe Gly His Pro Ser Gln Ala Val Phe Asp Asp Glu Ala Asp Lys
465   470   475   480

Thr Gly Glu Leu Arg Asp Ser Asp Phe Ser Asn Glu Gln Phe Ser Lys
            485   490   495

Leu Pro Met Phe Ile Asn Ser Gly Leu Ala Met Asp Gly Leu Phe Asp
        500   505   510

Asp Ser Glu Asp Glu Ser Asp Lys Leu Ser Tyr Pro Trp Asp Gly Thr
        515   520   525

Gln Ser Tyr Ser Leu Phe Asn Val Ser Pro Ser Cys Ser Ser Phe Asn

775

```
            530                     535                     540


Ser Pro Cys Arg Asp Ser Val Ser Pro Pro Lys Ser Leu Phe Ser Gln
545                 550                 555                 560


Arg Pro Gln Arg Met Arg Ser Arg Ser Arg Ser Phe Ser Arg His Arg
                565                 570                 575


Ser Cys Ser Arg Ser Pro Tyr Ser Arg Ser Arg Ser Arg Ser Pro Gly
            580                 585                 590


Ser Arg Ser Ser Ser Arg Ser Cys Tyr Tyr Tyr Glu Ser Ser His Tyr
        595                 600                 605


Arg His Arg Thr His Arg Asn Ser Pro Leu Tyr Val Arg Ser Arg Ser
    610                 615                 620


Arg Ser Pro Tyr Ser Arg Arg Pro Arg Tyr Asp Ser Tyr Glu Glu Tyr
625                 630                 635                 640


Gln His Glu Arg Leu Lys Arg Glu Glu Tyr Arg Arg Glu Tyr Glu Lys
                645                 650                 655


Arg Glu Ser Glu Arg Ala Lys Gln Arg Glu Arg Gln Arg Gln Lys Ala
            660                 665                 670


Ile Glu Glu Arg Arg Val Ile Tyr Val Gly Lys Ile Arg Pro Asp Thr
        675                 680                 685


Thr Arg Thr Glu Leu Arg Asp Arg Phe Glu Val Phe Gly Glu Ile Glu
    690                 695                 700


Glu Cys Thr Val Asn Leu Arg Asp Asp Gly Asp Ser Tyr Gly Phe Ile
705                 710                 715                 720


Thr Tyr Arg Tyr Thr Cys Asp Ala Phe Ala Ala Leu Glu Asn Gly Tyr
                725                 730                 735


Thr Leu Arg Arg Ser Asn Glu Thr Asp Phe Glu Leu Tyr Phe Cys Gly
            740                 745                 750


Arg Lys Gln Phe Phe Lys Ser Asn Tyr Ala Asp Leu Asp Ser Asn Ser
            755                 760                 765


Asp Asp Phe Asp Pro Ala Ser Thr Lys Ser Lys Tyr Asp Ser Leu Asp
    770                 775                 780
```

Phe Asp Ser Leu Leu Lys Glu Ala Gln Arg Ser Leu Arg Arg
785   790   795

<210>   2452
<211>   1043
<212>   PRT
<213>   Homo sapiens

<400>   2452

Met Ala Ala Ser Phe Pro Pro Thr Leu Gly Leu Ser Ser Ala Pro Asp
1   5   10   15

Glu Ile Gln His Pro His Ile Lys Phe Ser Glu Trp Lys Phe Lys Leu
                20   25   30

Phe Arg Val Arg Ser Phe Glu Lys Thr Pro Glu Glu Ala Gln Lys Glu
        35   40   45

Lys Lys Asp Ser Phe Glu Gly Lys Pro Ser Leu Glu Gln Ser Pro Ala
    50   55   60

Val Leu Asp Lys Ala Asp Gly Gln Lys Pro Val Pro Thr Gln Pro Leu
65   70   75   80

Leu Lys Ala His Pro Lys Phe Ser Lys Lys Phe His Asp Asn Glu Lys
                85   90   95

Ala Arg Gly Lys Ala Ile His Gln Ala Asn Leu Arg His Leu Cys Arg
            100   105   110

Ile Cys Gly Asn Ser Phe Arg Ala Asp Glu His Asn Arg Arg Tyr Pro
            115   120   125

Val His Gly Pro Val Asp Gly Lys Thr Leu Gly Leu Leu Arg Lys Lys
    130   135   140

Glu Lys Arg Ala Thr Ser Trp Pro Asp Leu Ile Ala Lys Val Phe Arg
145   150   155   160

Ile Asp Val Lys Ala Asp Val Asp Ser Ile His Pro Thr Glu Phe Cys
            165   170   175

His Asn Cys Trp Ser Ile Met His Arg Lys Phe Ser Ser Ala Pro Cys
            180   185   190

Glu Val Tyr Phe Pro Arg Asn Val Thr Met Glu Trp His Pro His Thr
        195   200   205

Pro Ser Cys Asp Ile Cys Asn Thr Ala Arg Arg Gly Leu Lys Arg Lys
    210   215   220

Ser Leu Gln Pro Asn Leu Gln Leu Ser Lys Lys Leu Lys Thr Val Leu
225   230   235   240

Asp Gln Ala Arg Gln Ala Arg Gln Arg Lys Arg Arg Ala Gln Ala Arg
                245   250   255

Ile Ser Ser Lys Asp Val Met Lys Lys Ile Ala Asn Cys Ser Lys Ile
        260   265   270

His Leu Ser Thr Lys Leu Leu Ala Val Asp Phe Pro Glu His Phe Val
        275   280   285

Lys Ser Ile Ser Cys Gln Ile Cys Glu His Ile Leu Ala Asp Pro Val
    290   295   300

Glu Thr Asn Cys Lys His Val Phe Cys Arg Val Cys Ile Leu Arg Cys
305   310   315   320

Leu Lys Val Met Gly Ser Tyr Cys Pro Ser Cys Arg Tyr Pro Cys Phe
            325   330   335

Pro Thr Asp Leu Glu Ser Pro Val Lys Ser Phe Leu Ser Val Leu Asn
        340   345   350

Ser Leu Met Val Lys Cys Pro Ala Lys Glu Cys Asn Glu Glu Val Ser
        355   360   365

Leu Glu Lys Tyr Asn His His Ile Ser Ser His Lys Glu Ser Lys Glu
    370   375   380

Ile Phe Val His Ile Asn Lys Gly Gly Arg Pro Arg Gln His Leu Leu
385   390   395   400

Ser Leu Thr Arg Arg Ala Gln Lys His Arg Leu Arg Glu Leu Lys Leu
            405   410   415

Gln Val Lys Ala Phe Ala Asp Lys Glu Glu Gly Gly Asp Val Lys Ser
        420   425   430

Val Cys Met Thr Leu Phe Leu Leu Ala Leu Arg Ala Arg Asn Glu His

```
          435                      440                      445


Arg Gln Ala Asp Glu Leu Glu Ala Ile Met Gln Gly Lys Gly Ser Gly
    450               455                   460


Leu Gln Pro Ala Val Cys Leu Ala Ile Arg Val Asn Thr Phe Leu Ser
465               470               475                   480


Cys Ser Gln Tyr His Lys Met Tyr Arg Thr Val Lys Ala Ile Thr Gly
                485               490                   495


Arg Gln Ile Phe Gln Pro Leu His Ala Leu Arg Asn Ala Glu Lys Val
            500               505               510


Leu Leu Pro Gly Tyr His His Phe Glu Trp Gln Pro Pro Leu Lys Asn
        515               520               525


Val Ser Ser Ser Thr Asp Val Gly Ile Ile Asp Gly Leu Ser Gly Leu
    530               535               540


Ser Ser Ser Val Asp Asp Tyr Pro Val Asp Thr Ile Ala Lys Arg Phe
545               550               555                   560


Arg Tyr Asp Ser Ala Leu Val Ser Ala Leu Met Asp Met Glu Glu Asp
            565               570                   575


Ile Leu Glu Gly Met Arg Ser Gln Asp Leu Asp Asp Tyr Leu Asn Gly
        580               585                   590


Pro Phe Thr Val Val Val Lys Glu Ser Cys Asp Gly Met Gly Asp Val
        595               600               605


Ser Glu Lys His Gly Ser Gly Pro Val Val Pro Glu Lys Ala Val Arg
    610               615               620


Phe Ser Phe Thr Ile Met Lys Ile Thr Ile Ala His Ser Ser Gln Asn
625               630               635                   640


Val Lys Val Phe Glu Glu Ala Lys Pro Asn Ser Glu Leu Cys Cys Lys
            645               650               655


Pro Leu Cys Leu Met Leu Ala Asp Glu Ser Asp His Glu Thr Leu Thr
        660               665               670


Ala Ile Leu Ser Pro Leu Ile Ala Glu Arg Glu Ala Met Lys Ser Ser
        675               680               685
```

```
Glu Leu Met Leu Glu Leu Gly Gly Ile Leu Arg Thr Phe Lys Phe Ile
    690               695               700

Phe Arg Gly Thr Gly Tyr Asp Glu Lys Leu Val Arg Glu Val Glu Gly
705               710               715               720

Leu Glu Ala Ser Gly Ser Val Tyr Ile Cys Thr Leu Cys Asp Ala Thr
              725               730               735

Arg Leu Glu Ala Ser Gln Asn Leu Val Phe His Ser Ile Thr Arg Ser
              740               745               750

His Ala Glu Asn Leu Glu Arg Tyr Glu Val Trp Arg Ser Asn Pro Tyr
          755               760               765

His Glu Ser Val Glu Glu Leu Arg Asp Arg Val Lys Gly Val Ser Ala
    770               775               780

Lys Pro Phe Ile Glu Thr Val Pro Ser Ile Asp Ala Leu His Cys Asp
785               790               795               800

Ile Gly Asn Ala Ala Glu Phe Tyr Lys Ile Phe Gln Leu Glu Ile Gly
              805               810               815

Glu Val Tyr Lys Asn Pro Asn Ala Ser Lys Glu Glu Arg Lys Arg Trp
          820               825               830

Gln Ala Thr Leu Asp Lys His Leu Arg Lys Lys Met Asn Leu Lys Pro
          835               840               845

Ile Met Arg Met Asn Gly Asn Phe Ala Arg Lys Leu Met Thr Lys Glu
    850               855               860

Thr Val Asp Ala Val Cys Glu Leu Ile Pro Ser Glu Glu Arg His Glu
865               870               875               880

Ala Leu Arg Glu Leu Met Asp Leu Tyr Leu Lys Met Lys Pro Val Trp
              885               890               895

Arg Ser Ser Cys Pro Ala Lys Glu Cys Pro Glu Ser Leu Cys Gln Tyr
              900               905               910

Ser Phe Asn Ser Gln Arg Phe Ala Glu Leu Leu Ser Thr Lys Phe Lys
          915               920               925
```

Tyr Arg Tyr Glu Gly Lys Ile Thr Asn Tyr Phe His Lys Thr Leu Ala
    930   935   940

His Val Pro Glu Ile Ile Glu Arg Asp Gly Ser Ile Gly Ala Trp Ala
945   950   955   960

Ser Glu Gly Asn Glu Ser Gly Asn Lys Leu Phe Arg Arg Phe Arg Lys
                965   970   975

Met Asn Ala Arg Gln Ser Lys Cys Tyr Glu Met Glu Asp Val Leu Lys
                980   985   990

His His Trp Leu Tyr Thr Ser Lys Tyr Leu Gln Lys Phe Met Asn Ala
                995   1000   1005

His Asn Ala Leu Lys Thr Ser Gly Phe Thr Met Asn Pro Gln Ala
    1010   1015   1020

Ser Leu Gly Asp Pro Leu Gly Ile Glu Asp Ser Leu Glu Ser Gln
    1025   1030   1035

Asp Ser Met Glu Phe
    1040

<210> 2453
<211> 527
<212> PRT
<213> Homo sapiens

<400> 2453

Met Ser Leu Gln Met Val Thr Val Ser Asn Asn Ile Ala Leu Ile Gln
1   5   10   15

Pro Gly Phe Ser Leu Met Asn Phe Asp Gly Gln Val Phe Phe Phe Gly
                20   25   30

Gln Lys Gly Trp Pro Lys Arg Ser Cys Pro Thr Gly Val Phe His Leu
            35   40   45

Asp Val Lys His Asn His Val Lys Leu Lys Pro Thr Ile Phe Ser Lys
    50   55   60

Asp Ser Cys Tyr Leu Pro Pro Leu Arg Tyr Pro Ala Thr Cys Thr Phe
65   70   75   80

Lys Gly Ser Leu Glu Ser Glu Lys His Gln Tyr Ile Ile His Gly Gly

```
                    85                      90                      95


Lys Thr Pro Asn Asn Glu Val Ser Asp Lys Ile Tyr Val Met Ser Ile
            100                 105                 110


Val Cys Lys Asn Asn Lys Lys Val Thr Phe Arg Cys Thr Glu Lys Asp
            115                 120                 125


Leu Val Gly Asp Val Pro Glu Ala Arg Tyr Gly His Ser Ile Asn Val
            130                 135                 140


Val Tyr Ser Arg Gly Lys Ser Met Gly Ala Leu Phe Gly Gly Arg Ser
145                 150                 155                 160


Tyr Met Pro Ser Thr His Arg Thr Thr Glu Lys Trp Asn Ser Val Ala
                165                 170                 175


Asp Cys Leu Pro Cys Val Phe Leu Val Asp Phe Glu Phe Gly Cys Ala
                180                 185                 190


Thr Ser Tyr Ile Leu Pro Glu Leu Gln Asp Gly Leu Ser Phe His Val
                195                 200                 205


Ser Ile Ala Lys Asn Asp Thr Ile Tyr Ile Leu Gly Gly His Ser Leu
    210                 215                 220


Ala Asn Asn Ile Arg Pro Ala Asn Leu Tyr Arg Ile Arg Val Asp Leu
225                 230                 235                 240


Pro Leu Gly Ser Pro Ala Val Asn Cys Thr Val Leu Pro Gly Gly Ile
                245                 250                 255


Ser Val Ser Ser Ala Ile Leu Thr Gln Thr Asn Asn Asp Glu Phe Val
                260                 265                 270


Ile Val Gly Gly Tyr Gln Leu Glu Asn Gln Lys Arg Met Ile Cys Asn
            275                 280                 285


Ile Ile Ser Leu Glu Asp Asn Lys Ile Glu Ile Arg Glu Met Glu Thr
    290                 295                 300


Pro Asp Trp Thr Pro Asp Ile Lys His Ser Lys Ile Trp Phe Gly Ser
305                 310                 315                 320


Asn Thr Gly Asn Gly Thr Val Phe Leu Gly Ile Pro Gly Asp Asn Lys
                325                 330                 335
```

```
Gln Val Val Ser Glu Gly Phe Tyr Phe Tyr Met Leu Lys Cys Ala Glu
            340                 345                 350

Asp Asp Thr Asn Glu Glu Gln Thr Thr Phe Thr Asn Ser Gln Thr Ser
            355                 360                 365

Thr Glu Asp Pro Gly Asp Ser Thr Pro Phe Glu Asp Ser Glu Glu Phe
    370                 375                 380

Cys Phe Ser Ala Glu Ala Asn Ser Phe Asp Gly Asp Asp Glu Phe Asp
385                 390                 395                 400

Thr Tyr Asn Glu Asp Asp Glu Glu Asp Glu Ser Glu Thr Gly Tyr Trp
                405                 410                 415

Ile Thr Cys Cys Pro Thr Cys Asp Val Asp Ile Asn Thr Trp Val Pro
            420                 425                 430

Phe Tyr Ser Thr Glu Leu Asn Lys Pro Ala Met Ile Tyr Cys Ser His
            435                 440                 445

Gly Asp Gly His Trp Val His Ala Gln Cys Met Asp Leu Ala Glu Arg
    450                 455                 460

Thr Leu Ile His Leu Ser Ala Gly Ser Asn Lys Tyr Tyr Cys Asn Glu
465                 470                 475                 480

His Val Glu Ile Ala Arg Ala Leu His Thr Pro Gln Arg Val Leu Pro
                485                 490                 495

Leu Lys Lys Pro Pro Met Lys Ser Leu Arg Lys Lys Gly Ser Gly Lys
            500                 505                 510

Ile Leu Thr Pro Ala Lys Lys Ser Phe Leu Arg Arg Leu Phe Asp
            515                 520                 525


<210>  2454
<211>  93
<212>  PRT
<213>  Homo sapiens

<400>  2454

Met Asn Ala Lys Val Val Val Val Leu Val Leu Val Leu Thr Ala Leu
1               5                   10                  15
```

```
Cys Leu Ser Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys
            20              25                  30


Arg Phe Phe Glu Ser His Val Ala Arg Ala Asn Val Lys His Leu Lys
            35              40                  45


Ile Leu Asn Thr Pro Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys
    50              55              60


Asn Asn Asn Arg Gln Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln
65              70              75                  80


Glu Tyr Leu Glu Lys Ala Leu Asn Lys Arg Phe Lys Met
                85                  90
```

<210> 2455
<211> 277
<212> PRT
<213> Homo sapiens

<400> 2455

```
Met Cys Val Gly Ala Arg Arg Leu Gly Arg Gly Pro Cys Ala Ala Leu
1               5               10                  15


Leu Leu Leu Gly Leu Gly Leu Ser Thr Val Thr Gly Leu His Cys Val
            20              25                  30


Gly Asp Thr Tyr Pro Ser Asn Asp Arg Cys Cys His Glu Cys Arg Pro
            35              40                  45


Gly Asn Gly Met Val Ser Arg Cys Ser Arg Ser Gln Asn Thr Val Cys
    50              55              60


Arg Pro Cys Gly Pro Gly Phe Tyr Asn Asp Val Val Ser Ser Lys Pro
65              70              75                  80


Cys Lys Pro Cys Thr Trp Cys Asn Leu Arg Ser Gly Ser Glu Arg Lys
            85              90                  95


Gln Leu Cys Thr Ala Thr Gln Asp Thr Val Cys Arg Cys Arg Ala Gly
            100             105                 110


Thr Gln Pro Leu Asp Ser Tyr Lys Pro Gly Val Asp Cys Ala Pro Cys
            115             120                 125


Pro Pro Gly His Phe Ser Pro Gly Asp Asn Gln Ala Cys Lys Pro Trp
    130             135                 140
```

784

Thr Asn Cys Thr Leu Ala Gly Lys His Thr Leu Gln Pro Ala Ser Asn
145   150   155   160

Ser Ser Asp Ala Ile Cys Glu Asp Arg Asp Pro Pro Ala Thr Gln Pro
                165   170   175

Gln Glu Thr Gln Gly Pro Pro Ala Arg Pro Ile Thr Val Gln Pro Thr
                180   185   190

Glu Ala Trp Pro Arg Thr Ser Gln Gly Pro Ser Thr Arg Pro Val Glu
                195   200   205

Val Pro Gly Gly Arg Ala Val Ala Ala Ile Leu Gly Leu Gly Leu Val
    210   215   220

Leu Gly Leu Leu Gly Pro Leu Ala Ile Leu Leu Ala Leu Tyr Leu Leu
225   230   235   240

Arg Arg Asp Gln Arg Leu Pro Pro Asp Ala His Lys Pro Pro Gly Gly
                245   250   255

Gly Ser Phe Arg Thr Pro Ile Gln Glu Glu Gln Ala Asp Ala His Ser
                260   265   270

Thr Leu Ala Lys Ile
        275

<210> 2456
<211> 183
<212> PRT
<213> Homo sapiens

<400> 2456

Met Glu Arg Val Gln Pro Leu Glu Glu Asn Val Gly Asn Ala Ala Arg
1   5   10   15

Pro Arg Phe Glu Arg Asn Lys Leu Leu Leu Val Ala Ser Val Ile Gln
                20   25   30

Gly Leu Gly Leu Leu Leu Cys Phe Thr Tyr Ile Cys Leu His Phe Ser
                35   40   45

Ala Leu Gln Val Ser His Arg Tyr Pro Arg Ile Gln Ser Ile Lys Val
    50   55   60

```
Gln Phe Thr Glu Tyr Lys Lys Glu Lys Gly Phe Ile Leu Thr Ser Gln
65              70              75                  80


Lys Glu Asp Glu Ile Met Lys Val Gln Asn Asn Ser Val Ile Ile Asn
            85              90                  95


Cys Asp Gly Phe Tyr Leu Ile Ser Leu Lys Gly Tyr Phe Ser Gln Glu
            100             105             110


Val Asn Ile Ser Leu His Tyr Gln Lys Asp Glu Glu Pro Leu Phe Gln
            115             120             125


Leu Lys Lys Val Arg Ser Val Asn Ser Leu Met Val Ala Ser Leu Thr
    130             135             140


Tyr Lys Asp Lys Val Tyr Leu Asn Val Thr Thr Asp Asn Thr Ser Leu
145             150             155                 160


Asp Asp Phe His Val Asn Gly Gly Glu Leu Ile Leu Ile His Gln Asn
            165             170             175


Pro Gly Glu Phe Cys Val Leu
            180


<210>   2457
<211>   275
<212>   PRT
<213>   Homo sapiens

<400>   2457

Met Leu Ser Leu Leu Leu Leu Ala Leu Pro Val Leu Ala Ser Arg Ala
1               5               10                  15


Tyr Ala Ala Pro Ala Pro Val Gln Ala Leu Gln Gln Ala Gly Ile Val
            20              25                  30


Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val Ser Leu
            35              40                  45


Arg Val Arg Asp Arg Tyr Trp Met His Phe Cys Gly Gly Ser Leu Ile
    50              55              60


His Pro Gln Trp Val Leu Thr Ala Ala His Cys Leu Gly Pro Asp Val
65              70              75                  80


Lys Asp Leu Ala Thr Leu Arg Val Gln Leu Arg Glu Gln His Leu Tyr
            85              90                  95
```

786

Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His Pro Gln
        100   105   110

Phe Tyr Ile Ile Gln Thr Gly Ala Asp Ile Ala Leu Leu Glu Leu Glu
        115   120   125

Glu Pro Val Asn Ile Ser Ser Arg Val His Thr Val Met Leu Pro Pro
    130   135   140

Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr Gly Trp
145   150   155   160

Gly Asp Val Asp Asn Asp Glu Pro Leu Pro Pro Pro Phe Pro Leu Lys
                165   170   175

Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala Lys Tyr
            180   185   190

His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Ile Arg Asp Asp
        195   200   205

Met Leu Cys Ala Gly Asn Ser Gln Arg Asp Ser Cys Lys Gly Asp Ser
    210   215   220

Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln Ala Gly
225   230   235   240

Val Val Ser Trp Asp Glu Gly Cys Ala Gln Pro Asn Arg Pro Gly Ile
                245   250   255

Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr Val Pro
            260   265   270

Lys Lys Pro
        275

<210> 2458
<211> 363
<212> PRT
<213> Homo sapiens

<400> 2458

Met Ala Gln Thr Pro Ala Phe Asp Lys Pro Lys Val Glu Leu His Val
1   5   10   15

His Leu Asp Gly Ser Ile Lys Pro Glu Thr Ile Leu Tyr Tyr Gly Arg
        20   25   30

Arg Arg Gly Ile Ala Leu Pro Ala Asn Thr Ala Glu Gly Leu Leu Asn
        35   40   45

Val Ile Gly Met Asp Lys Pro Leu Thr Leu Pro Asp Phe Leu Ala Lys
    50   55   60

Phe Asp Tyr Tyr Met Pro Ala Ile Ala Gly Cys Arg Glu Ala Ile Lys
65   70   75   80

Arg Ile Ala Tyr Glu Phe Val Glu Met Lys Ala Lys Glu Gly Val Val
            85   90   95

Tyr Val Glu Val Arg Tyr Ser Pro His Leu Leu Ala Asn Ser Lys Val
        100   105   110

Glu Pro Ile Pro Trp Asn Gln Ala Glu Gly Asp Leu Thr Pro Asp Glu
        115   120   125

Val Val Ala Leu Val Gly Gln Gly Leu Gln Glu Gly Glu Arg Asp Phe
    130   135   140

Gly Val Lys Ala Arg Ser Ile Leu Cys Cys Met Arg His Gln Pro Asn
145   150   155   160

Trp Ser Pro Lys Val Val Glu Leu Cys Lys Asn Tyr Gln Gln Gln Thr
            165   170   175

Val Val Ala Ile Asp Leu Ala Gly Asp Glu Thr Ile Pro Gly Ser Ser
            180   185   190

Leu Leu Pro Gly His Val Gln Ala Tyr Gln Glu Ala Val Lys Ser Gly
        195   200   205

Ile His Arg Thr Val His Ala Gly Glu Val Gly Ser Ala Glu Val Val
    210   215   220

Lys Glu Ala Val Asp Ile Leu Lys Thr Glu Arg Leu Gly His Gly Tyr
225   230   235   240

His Thr Leu Glu Asp Gln Ala Leu Tyr Asn Arg Leu Arg Gln Glu Asn
            245   250   255

Met His Phe Glu Ile Cys Pro Trp Ser Ser Tyr Leu Thr Gly Ala Trp

```
              260                    265                     270
```

Lys Pro Asp Thr Glu His Ala Val Ile Arg Leu Lys Asn Asp Gln Ala
        275   280   285

Asn Tyr Ser Leu Asn Thr Asp Asp Pro Leu Ile Phe Lys Ser Thr Leu
        290   295   300

Asp Thr Asp Tyr Gln Met Thr Lys Arg Asp Met Gly Phe Thr Glu Glu
305   310   315   320

Glu Phe Lys Arg Leu Asn Ile Asn Ala Ala Lys Ser Ser Phe Leu Pro
            325   330   335

Glu Asp Glu Lys Arg Glu Leu Leu Asp Leu Leu Tyr Lys Ala Tyr Gly
            340   345   350

Met Pro Pro Ser Ala Ser Ala Gly Gln Asn Leu
        355   360

<210>   2459
<211>   443
<212>   PRT
<213>   Homo sapiens

<400>   2459

Met Asp Phe Pro Cys Leu Trp Leu Gly Leu Leu Leu Pro Leu Val Ala
1   5   10   15

Ala Leu Asp Phe Asn Tyr His Arg Gln Glu Gly Met Glu Ala Phe Leu
            20   25   30

Lys Thr Val Ala Gln Asn Tyr Ser Ser Val Thr His Leu His Ser Ile
            35   40   45

Gly Lys Ser Val Lys Gly Arg Asn Leu Trp Val Leu Val Val Gly Arg
        50   55   60

Phe Pro Lys Glu His Arg Ile Gly Ile Pro Glu Phe Lys Tyr Val Ala
65   70   75   80

Asn Met His Gly Asp Glu Thr Val Gly Arg Glu Leu Leu Leu His Leu
                85   90   95

Ile Asp Tyr Leu Val Thr Ser Asp Gly Lys Asp Pro Glu Ile Thr Asn
            100   105   110

Leu Ile Asn Ser Thr Arg Ile His Ile Met Pro Ser Met Asn Pro Asp
    115   120   125

Gly Phe Glu Ala Val Lys Lys Pro Asp Cys Tyr Tyr Ser Ile Gly Arg
    130   135   140

Glu Asn Tyr Asn Gln Tyr Asp Leu Asn Arg Asn Phe Pro Asp Ala Phe
145   150   155   160

Glu Tyr Asn Asn Val Ser Arg Gln Pro Glu Thr Val Ala Val Met Lys
                165   170   175

Trp Leu Lys Thr Glu Thr Phe Val Leu Ser Ala Asn Leu His Gly Gly
        180   185   190

Ala Leu Val Ala Ser Tyr Pro Phe Asp Asn Gly Val Gln Ala Thr Gly
    195   200   205

Ala Leu Tyr Ser Arg Ser Leu Thr Pro Asp Asp Asp Val Phe Gln Tyr
    210   215   220

Leu Ala His Thr Tyr Ala Ser Arg Asn Pro Asn Met Lys Lys Gly Asp
225   230   235   240

Glu Cys Lys Asn Lys Met Asn Phe Pro Asn Gly Val Thr Asn Gly Tyr
            245   250   255

Ser Trp Tyr Pro Leu Gln Gly Gly Met Gln Asp Tyr Asn Tyr Ile Trp
        260   265   270

Ala Gln Cys Phe Glu Ile Thr Leu Glu Leu Ser Cys Cys Lys Tyr Pro
        275   280   285

Arg Glu Glu Lys Leu Pro Ser Phe Trp Asn Asn Asn Lys Ala Ser Leu
    290   295   300

Ile Glu Tyr Ile Lys Gln Val His Leu Gly Val Lys Gly Gln Val Phe
305   310   315   320

Asp Gln Asn Gly Asn Pro Leu Pro Asn Val Ile Val Glu Val Gln Asp
            325   330   335

Arg Lys His Ile Cys Pro Tyr Arg Thr Asn Lys Tyr Gly Glu Tyr Tyr
        340   345   350

Leu Leu Leu Leu Pro Gly Ser Tyr Ile Ile Asn Val Thr Val Pro Gly
        355   360   365

His Asp Pro His Ile Thr Lys Val Ile Ile Pro Glu Lys Ser Gln Asn
    370   375   380

Phe Ser Ala Leu Lys Lys Asp Ile Leu Leu Pro Phe Gln Gly Gln Leu
385   390   395   400

Asp Ser Ile Pro Val Ser Asn Pro Ser Cys Pro Met Ile Pro Leu Tyr
                405   410   415

Arg Asn Leu Pro Asp His Ser Ala Ala Thr Lys Pro Ser Leu Phe Leu
            420   425   430

Phe Leu Val Ser Leu Leu His Ile Phe Phe Lys
        435   440

<210> 2460
<211> 144
<212> PRT
<213> Homo sapiens

<400> 2460

Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
1   5   10   15

Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
            20   25   30

Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
        35   40   45

Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
    50   55   60

Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
65   70   75   80

Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
            85   90   95

Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
            100   105   110

Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
        115   120   125

```
Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
    130                 135             140
```

```
<210>   2461
<211>   204
<212>   PRT
<213>   Homo sapiens
```

```
<400>   2461
```

```
Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln
1               5               10                  15
```

```
Leu Leu Leu Trp His Ser Ala Leu Trp Thr Val Gln Glu Ala Thr Pro
            20              25                  30
```

```
Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
        35              40                  45
```

```
Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
    50                  55                  60
```

```
Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu
65                  70                  75                  80
```

```
Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser
                85                  90                  95
```

```
Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu
            100                 105                 110
```

```
Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu
        115                 120                 125
```

```
Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala
    130                 135                 140
```

```
Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu
145                 150                 155                 160
```

```
Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg
                165                 170                 175
```

```
Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu
            180                 185                 190
```

```
Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
        195                 200
```

```
<210>  2462
<211>  224
<212>  PRT
<213>  Homo sapiens


<400>  2462
```

```
Met Glu Lys Leu Leu Cys Phe Leu Val Leu Thr Ser Leu Ser His Ala
1               5                   10                  15


Phe Gly Gln Thr Asp Met Ser Arg Lys Ala Phe Val Phe Pro Lys Glu
            20                  25                  30


Ser Asp Thr Ser Tyr Val Ser Leu Lys Ala Pro Leu Thr Lys Pro Leu
        35                  40                  45


Lys Ala Phe Thr Val Cys Leu His Phe Tyr Thr Glu Leu Ser Ser Thr
    50                  55                  60


Arg Gly Thr Val Phe Ser Arg Met Pro Pro Arg Asp Lys Thr Met Arg
65                  70                  75                  80


Phe Phe Ile Phe Trp Ser Lys Asp Ile Gly Tyr Ser Phe Thr Val Gly
                85                  90                  95


Gly Ser Glu Ile Leu Phe Glu Val Pro Glu Val Thr Val Ala Pro Val
            100                 105                 110


His Ile Cys Thr Ser Trp Glu Ser Ala Ser Gly Ile Val Glu Phe Trp
            115                 120                 125


Val Asp Gly Lys Pro Arg Val Arg Lys Ser Leu Lys Lys Gly Tyr Thr
    130                 135                 140


Val Gly Ala Glu Ala Ser Ile Ile Leu Gly Gln Glu Gln Asp Ser Phe
145                 150                 155                 160


Gly Gly Asn Phe Glu Gly Ser Gln Ser Leu Val Gly Asp Ile Gly Asn
                165                 170                 175


Val Asn Met Trp Asp Phe Val Leu Ser Pro Asp Glu Ile Asn Thr Ile
            180                 185                 190


Tyr Leu Gly Gly Pro Phe Ser Pro Asn Val Leu Asn Trp Arg Ala Leu
        195                 200                 205
```

Lys Tyr Glu Val Gln Gly Glu Val Phe Thr Lys Pro Gln Leu Trp Pro
    210   215   220

<210>   2463
<211>   993
<212>   PRT
<213>   Homo sapiens

<400>   2463

Met Pro Ala Leu Ala Arg Asp Ala Gly Thr Val Pro Leu Leu Val Val
1   5   10   15

Phe Ser Ala Met Ile Phe Gly Thr Ile Thr Asn Gln Asp Leu Pro Val
            20   25   30

Ile Lys Cys Val Leu Ile Asn His Lys Asn Asn Asp Ser Ser Val Gly
        35   40   45

Lys Ser Ser Ser Tyr Pro Met Val Ser Glu Ser Pro Glu Asp Leu Gly
    50   55   60

Cys Ala Leu Arg Pro Gln Ser Ser Gly Thr Val Tyr Glu Ala Ala Ala
65   70   75   80

Val Glu Val Asp Val Ser Ala Ser Ile Thr Leu Gln Val Leu Val Asp
            85   90   95

Ala Pro Gly Asn Ile Ser Cys Leu Trp Val Phe Lys His Ser Ser Leu
            100   105   110

Asn Cys Gln Pro His Phe Asp Leu Gln Asn Arg Gly Val Val Ser Met
        115   120   125

Val Ile Leu Lys Met Thr Glu Thr Gln Ala Gly Glu Tyr Leu Leu Phe
    130   135   140

Ile Gln Ser Glu Ala Thr Asn Tyr Thr Ile Leu Phe Thr Val Ser Ile
145   150   155   160

Arg Asn Thr Leu Leu Tyr Thr Leu Arg Arg Pro Tyr Phe Arg Lys Met
            165   170   175

Glu Asn Gln Asp Ala Leu Val Cys Ile Ser Glu Ser Val Pro Glu Pro
            180   185   190

794

Ile Val Glu Trp Val Leu Cys Asp Ser Gln Gly Glu Ser Cys Lys Glu
        195   200   205

Glu Ser Pro Ala Val Val Lys Lys Glu Glu Lys Val Leu His Glu Leu
        210   215   220

Phe Gly Thr Asp Ile Arg Cys Cys Ala Arg Asn Glu Leu Gly Arg Glu
225   230   235   240

Cys Thr Arg Leu Phe Thr Ile Asp Leu Asn Gln Thr Pro Gln Thr Thr
        245   250   255

Leu Pro Gln Leu Phe Leu Lys Val Gly Glu Pro Leu Trp Ile Arg Cys
        260   265   270

Lys Ala Val His Val Asn His Gly Phe Gly Leu Thr Trp Glu Leu Glu
        275   280   285

Asn Lys Ala Leu Glu Glu Gly Asn Tyr Phe Glu Met Ser Thr Tyr Ser
        290   295   300

Thr Asn Arg Thr Met Ile Arg Ile Leu Phe Ala Phe Val Ser Ser Val
305   310   315   320

Ala Arg Asn Asp Thr Gly Tyr Tyr Thr Cys Ser Ser Ser Lys His Pro
        325   330   335

Ser Gln Ser Ala Leu Val Thr Ile Val Gly Lys Gly Phe Ile Asn Ala
        340   345   350

Thr Asn Ser Ser Glu Asp Tyr Glu Ile Asp Gln Tyr Glu Glu Phe Cys
        355   360   365

Phe Ser Val Arg Phe Lys Ala Tyr Pro Gln Ile Arg Cys Thr Trp Thr
370   375   380

Phe Ser Arg Lys Ser Phe Pro Cys Glu Gln Lys Gly Leu Asp Asn Gly
385   390   395   400

Tyr Ser Ile Ser Lys Phe Cys Asn His Lys His Gln Pro Gly Glu Tyr
        405   410   415

Ile Phe His Ala Glu Asn Asp Asp Ala Gln Phe Thr Lys Met Phe Thr
        420   425   430

Leu Asn Ile Arg Arg Lys Pro Gln Val Leu Ala Glu Ala Ser Ala Ser

795

```
               435                    440                        445


    Gln Ala Ser Cys Phe Ser Asp Gly Tyr Pro Leu Pro Ser Trp Thr Trp
       450            455            460


    Lys Lys Cys Ser Asp Lys Ser Pro Asn Cys Thr Glu Glu Ile Thr Glu
    465            470            475            480


    Gly Val Trp Asn Arg Lys Ala Asn Arg Lys Val Phe Gly Gln Trp Val
                   485            490            495


    Ser Ser Ser Thr Leu Asn Met Ser Glu Ala Ile Lys Gly Phe Leu Val
                500            505            510


    Lys Cys Cys Ala Tyr Asn Ser Leu Gly Thr Ser Cys Glu Thr Ile Leu
                515            520            525


    Leu Asn Ser Pro Gly Pro Phe Pro Phe Ile Gln Asp Asn Ile Ser Phe
       530            535            540


    Tyr Ala Thr Ile Gly Val Cys Leu Leu Phe Ile Val Val Leu Thr Leu
    545            550            555            560


    Leu Ile Cys His Lys Tyr Lys Lys Gln Phe Arg Tyr Glu Ser Gln Leu
                565            570            575


    Gln Met Val Gln Val Thr Gly Ser Ser Asp Asn Glu Tyr Phe Tyr Val
                580            585            590


    Asp Phe Arg Glu Tyr Glu Tyr Asp Leu Lys Trp Glu Phe Pro Arg Glu
                595            600            605


    Asn Leu Glu Phe Gly Lys Val Leu Gly Ser Gly Ala Phe Gly Lys Val
       610            615            620


    Met Asn Ala Thr Ala Tyr Gly Ile Ser Lys Thr Gly Val Ser Ile Gln
    625            630            635            640


    Val Ala Val Lys Met Leu Lys Glu Lys Ala Asp Ser Ser Glu Arg Glu
                645            650            655


    Ala Leu Met Ser Glu Leu Lys Met Met Thr Gln Leu Gly Ser His Glu
                660            665            670


    Asn Ile Val Asn Leu Leu Gly Ala Cys Thr Leu Ser Gly Pro Ile Tyr
                675            680            685
```

```
Leu Ile Phe Glu Tyr Cys Cys Tyr Gly Asp Leu Leu Asn Tyr Leu Arg
    690             695             700

Ser Lys Arg Glu Lys Phe His Arg Thr Trp Thr Glu Ile Phe Lys Glu
705             710             715             720

His Asn Phe Ser Phe Tyr Pro Thr Phe Gln Ser His Pro Asn Ser Ser
            725             730             735

Met Pro Gly Ser Arg Glu Val Gln Ile His Pro Asp Ser Asp Gln Ile
        740             745             750

Ser Gly Leu His Gly Asn Ser Phe His Ser Glu Asp Glu Ile Glu Tyr
        755             760             765

Glu Asn Gln Lys Arg Leu Glu Glu Glu Asp Leu Asn Val Leu Thr
    770             775             780

Phe Glu Asp Leu Leu Cys Phe Ala Tyr Gln Val Ala Lys Gly Met Glu
785             790             795             800

Phe Leu Glu Phe Lys Ser Cys Val His Arg Asp Leu Ala Ala Arg Asn
            805             810             815

Val Leu Val Thr His Gly Lys Val Val Lys Ile Cys Asp Phe Gly Leu
        820             825             830

Ala Arg Asp Ile Met Ser Asp Ser Asn Tyr Val Val Arg Gly Asn Ala
        835             840             845

Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ser Leu Phe Glu Gly Ile
    850             855             860

Tyr Thr Ile Lys Ser Asp Val Trp Ser Tyr Gly Ile Leu Leu Trp Glu
865             870             875             880

Ile Phe Ser Leu Gly Val Asn Pro Tyr Pro Gly Ile Pro Val Asp Ala
            885             890             895

Asn Phe Tyr Lys Leu Ile Gln Asn Gly Phe Lys Met Asp Gln Pro Phe
        900             905             910

Tyr Ala Thr Glu Glu Ile Tyr Ile Ile Met Gln Ser Cys Trp Ala Phe
        915             920             925
```

797

Asp Ser Arg Lys Arg Pro Ser Phe Pro Asn Leu Thr Ser Phe Leu Gly
    930   935   940

Cys Gln Leu Ala Asp Ala Glu Glu Ala Met Tyr Gln Asn Val Asp Gly
945   950   955   960

Arg Val Ser Glu Cys Pro His Thr Tyr Gln Asn Arg Arg Pro Phe Ser
            965   970   975

Arg Glu Met Asp Leu Gly Leu Leu Ser Pro Gln Ala Gln Val Glu Asp
        980   985   990

Ser

<210> 2464
<211> 443
<212> PRT
<213> Homo sapiens

<400> 2464

Met Glu Val Thr Ala Asp Gln Pro Arg Trp Val Ser His His His Pro
1   5   10   15

Ala Val Leu Asn Gly Gln His Pro Asp Thr His His Pro Gly Leu Ser
            20   25   30

His Ser Tyr Met Asp Ala Ala Gln Tyr Pro Leu Pro Glu Glu Val Asp
        35   40   45

Val Leu Phe Asn Ile Asp Gly Gln Gly Asn His Val Pro Pro Tyr Tyr
    50   55   60

Gly Asn Ser Val Arg Ala Thr Val Gln Arg Tyr Pro Pro Thr His His
65   70   75   80

Gly Ser Gln Val Cys Arg Pro Pro Leu Leu His Gly Ser Leu Pro Trp
            85   90   95

Leu Asp Gly Gly Lys Ala Leu Gly Ser His His Thr Ala Ser Pro Trp
        100   105   110

Asn Leu Ser Pro Phe Ser Lys Thr Ser Ile His His Gly Ser Pro Gly
        115   120   125

Pro Leu Ser Val Tyr Pro Pro Ala Ser Ser Ser Ser Leu Ser Gly Gly

```
               130                    135                     140


        His Ala Ser Pro His Leu Phe Thr Phe Pro Pro Thr Pro Pro Lys Asp
        145                 150                 155                 160


        Val Ser Pro Asp Pro Ser Leu Ser Thr Pro Gly Ser Ala Gly Ser Ala
                        165                 170                 175


        Arg Gln Asp Glu Lys Glu Cys Leu Lys Tyr Gln Val Pro Leu Pro Asp
                        180                 185                 190


        Ser Met Lys Leu Glu Ser Ser His Ser Arg Gly Ser Met Thr Ala Leu
                195                 200                 205


        Gly Gly Ala Ser Ser Ser Thr His His Pro Ile Thr Thr Tyr Pro Pro
        210                 215                 220


        Tyr Val Pro Glu Tyr Ser Ser Gly Leu Phe Pro Pro Ser Ser Leu Leu
        225                 230                 235                 240


        Gly Gly Ser Pro Thr Gly Phe Gly Cys Lys Ser Arg Pro Lys Ala Arg
                        245                 250                 255


        Ser Ser Thr Gly Arg Glu Cys Val Asn Cys Gly Ala Thr Ser Thr Pro
                260                 265                 270


        Leu Trp Arg Arg Asp Gly Thr Gly His Tyr Leu Cys Asn Ala Cys Gly
                275                 280                 285


        Leu Tyr His Lys Met Asn Gly Gln Asn Arg Pro Leu Ile Lys Pro Lys
        290                 295                 300


        Arg Arg Leu Ser Ala Ala Arg Arg Ala Gly Thr Ser Cys Ala Asn Cys
        305                 310                 315                 320


        Gln Thr Thr Thr Thr Thr Leu Trp Arg Arg Asn Ala Asn Gly Asp Pro
                        325                 330                 335


        Val Cys Asn Ala Cys Gly Leu Tyr Tyr Lys Leu His Asn Ile Asn Arg
                        340                 345                 350


        Pro Leu Thr Met Lys Lys Glu Gly Ile Gln Thr Arg Asn Arg Lys Met
                355                 360                 365


        Ser Ser Lys Ser Lys Lys Cys Lys Lys Val His Asp Ser Leu Glu Asp
                370                 375                 380
```

                                            799

```
Phe Pro Lys Asn Ser Ser Phe Asn Pro Ala Ala Leu Ser Arg His Met
385             390             395                         400


Ser Ser Leu Ser His Ile Ser Pro Phe Ser His Ser Ser His Met Leu
            405             410                     415


Thr Thr Pro Thr Pro Met His Pro Pro Ser Ser Leu Ser Phe Gly Pro
            420             425                 430


His His Pro Ser Ser Met Val Thr Ala Met Gly
        435             440
```

<210> 2465
<211> 459
<212> PRT
<213> Homo sapiens

<400> 2465

```
Met Thr Ile Leu Gly Thr Thr Phe Gly Met Val Phe Ser Leu Leu Gln
1               5               10                  15


Val Val Ser Gly Glu Ser Gly Tyr Ala Gln Asn Gly Asp Leu Glu Asp
            20              25                  30


Ala Glu Leu Asp Asp Tyr Ser Phe Ser Cys Tyr Ser Gln Leu Glu Val
        35              40                  45


Asn Gly Ser Gln His Ser Leu Thr Cys Ala Phe Glu Asp Pro Asp Val
    50              55                  60


Asn Ile Thr Asn Leu Glu Phe Glu Ile Cys Gly Ala Leu Val Glu Val
65              70                  75                      80


Lys Cys Leu Asn Phe Arg Lys Leu Gln Glu Ile Tyr Phe Ile Glu Thr
            85              90                  95


Lys Lys Phe Leu Leu Ile Gly Lys Ser Asn Ile Cys Val Lys Val Gly
            100             105                 110


Glu Lys Ser Leu Thr Cys Lys Lys Ile Asp Leu Thr Thr Ile Val Lys
        115             120                 125


Pro Glu Ala Pro Phe Asp Leu Ser Val Val Tyr Arg Glu Gly Ala Asn
    130             135                 140
```

```
Asp Phe Val Val Thr Phe Asn Thr Ser His Leu Gln Lys Lys Tyr Val
145               150               155               160


Lys Val Leu Met His Asp Val Ala Tyr Arg Gln Glu Lys Asp Glu Asn
              165               170               175


Lys Trp Thr His Val Asn Leu Ser Ser Thr Lys Leu Thr Leu Leu Gln
          180               185               190


Arg Lys Leu Gln Pro Ala Ala Met Tyr Glu Ile Lys Val Arg Ser Ile
      195               200               205


Pro Asp His Tyr Phe Lys Gly Phe Trp Ser Glu Trp Ser Pro Ser Tyr
210               215               220


Tyr Phe Arg Thr Pro Glu Ile Asn Asn Ser Ser Gly Glu Met Asp Pro
225               230               235               240


Ile Leu Leu Thr Ile Ser Ile Leu Ser Phe Phe Ser Val Ala Leu Leu
              245               250               255


Val Ile Leu Ala Cys Val Leu Trp Lys Lys Arg Ile Lys Pro Ile Val
      260               265               270


Trp Pro Ser Leu Pro Asp His Lys Lys Thr Leu Glu His Leu Cys Lys
      275               280               285


Lys Pro Arg Lys Asn Leu Asn Val Ser Phe Asn Pro Glu Ser Phe Leu
290               295               300


Asp Cys Gln Ile His Arg Val Asp Asp Ile Gln Ala Arg Asp Glu Val
305               310               315               320


Glu Gly Phe Leu Gln Asp Thr Phe Pro Gln Gln Leu Glu Glu Ser Glu
              325               330               335


Lys Gln Arg Leu Gly Gly Asp Val Gln Ser Pro Asn Cys Pro Ser Glu
          340               345               350


Asp Val Val Ile Thr Pro Glu Ser Phe Gly Arg Asp Ser Ser Leu Thr
          355               360               365


Cys Leu Ala Gly Asn Val Ser Ala Cys Asp Ala Pro Ile Leu Ser Ser
      370               375               380


Ser Arg Ser Leu Asp Cys Arg Glu Ser Gly Lys Asn Gly Pro His Val
```

385   390   395   400

Tyr Gln Asp Leu Leu Leu Ser Leu Gly Thr Thr Asn Ser Thr Leu Pro
                405   410   415

Pro Pro Phe Ser Leu Gln Ser Gly Ile Leu Thr Leu Asn Pro Val Ala
                420   425   430

Gln Gly Gln Pro Ile Leu Thr Ser Leu Gly Ser Asn Gln Glu Glu Ala
            435   440   445

Tyr Val Thr Met Ser Ser Phe Tyr Gln Asn Gln
    450   455

<210> 2466
<211> 362
<212> PRT
<213> Homo sapiens

<400> 2466

Met Ala Thr Ala Glu Thr Ala Leu Pro Ser Ile Ser Thr Leu Thr Ala
1   5   10   15

Leu Gly Pro Phe Pro Asp Thr Gln Asp Asp Phe Leu Lys Trp Trp Arg
                20   25   30

Ser Glu Glu Ala Gln Asp Met Gly Pro Gly Pro Asp Pro Thr Glu
            35   40   45

Pro Pro Leu His Val Lys Ser Glu Asp Gln Pro Gly Glu Glu Glu Asp
    50   55   60

Asp Glu Arg Gly Ala Asp Ala Thr Trp Asp Leu Asp Leu Leu Leu Thr
65   70   75   80

Asn Phe Ser Gly Pro Glu Pro Gly Gly Ala Pro Gln Thr Cys Ala Leu
                85   90   95

Ala Pro Ser Glu Ala Ser Gly Ala Gln Tyr Pro Pro Pro Glu Thr
                100   105   110

Leu Gly Ala Tyr Ala Gly Gly Pro Gly Leu Val Ala Gly Leu Leu Gly
            115   120   125

Ser Glu Asp His Ser Gly Trp Val Arg Pro Ala Leu Arg Ala Arg Ala
    130   135   140

802

Pro Asp Ala Phe Val Gly Pro Ala Leu Ala Pro Ala Pro Ala Pro Glu
145   150   155   160

Pro Lys Ala Leu Ala Leu Gln Pro Val Tyr Pro Gly Pro Gly Ala Gly
                165   170   175

Ser Ser Gly Gly Tyr Phe Pro Arg Thr Gly Leu Ser Val Pro Ala Ala
            180   185   190

Ser Gly Ala Pro Tyr Gly Leu Leu Ser Gly Tyr Pro Ala Met Tyr Pro
        195   200   205

Ala Pro Gln Tyr Gln Gly His Phe Gln Leu Phe Arg Gly Leu Gln Gly
    210   215   220

Pro Ala Pro Gly Pro Ala Thr Ser Pro Ser Phe Leu Ser Cys Leu Gly
225   230   235   240

Pro Gly Thr Val Gly Thr Gly Leu Gly Gly Thr Ala Glu Asp Pro Gly
            245   250   255

Val Ile Ala Glu Thr Ala Pro Ser Lys Arg Gly Arg Arg Ser Trp Ala
        260   265   270

Arg Lys Arg Gln Ala Ala His Thr Cys Ala His Pro Gly Cys Gly Lys
        275   280   285

Ser Tyr Thr Lys Ser Ser His Leu Lys Ala His Leu Arg Thr His Thr
    290   295   300

Gly Glu Lys Pro Tyr Ala Cys Thr Trp Glu Gly Cys Gly Trp Arg Phe
305   310   315   320

Ala Arg Ser Asp Glu Leu Thr Arg His Tyr Arg Lys His Thr Gly Gln
            325   330   335

Arg Pro Phe Arg Cys Gln Leu Cys Pro Arg Ala Phe Ser Arg Ser Asp
            340   345   350

His Leu Ala Leu His Met Lys Arg His Leu
        355   360

<210> 2467
<211> 509
<212> PRT
<213> Homo sapiens

803

<400> 2467

Met Gly Cys Gly Cys Ser Ser His Pro Glu Asp Asp Trp Met Glu Asn
1   5   10   15

Ile Asp Val Cys Glu Asn Cys His Tyr Pro Ile Val Pro Leu Asp Gly
            20   25   30

Lys Gly Thr Leu Leu Ile Arg Asn Gly Ser Glu Val Arg Asp Pro Leu
        35   40   45

Val Thr Tyr Glu Gly Ser Asn Pro Pro Ala Ser Pro Leu Gln Asp Asn
    50   55   60

Leu Val Ile Ala Leu His Ser Tyr Glu Pro Ser His Asp Gly Asp Leu
65   70   75   80

Gly Phe Glu Lys Gly Glu Pro Leu Arg Ile Leu Glu Gln Ser Gly Glu
                85   90   95

Trp Trp Lys Ala Gln Ser Leu Thr Thr Gly Gln Glu Gly Phe Ile Pro
            100   105   110

Phe Asn Phe Val Ala Lys Ala Asn Ser Leu Glu Pro Glu Pro Trp Phe
        115   120   125

Phe Lys Asn Leu Ser Arg Lys Asp Ala Glu Arg Gln Leu Leu Ala Pro
    130   135   140

Gly Asn Thr His Gly Ser Phe Leu Ile Arg Glu Ser Glu Ser Thr Ala
145   150   155   160

Gly Ser Phe Ser Leu Ser Val Arg Asp Phe Asp Gln Asn Gln Gly Glu
                165   170   175

Val Val Lys His Tyr Lys Ile Arg Asn Leu Asp Asn Gly Gly Phe Tyr
            180   185   190

Ile Ser Pro Arg Ile Thr Phe Pro Gly Leu His Glu Leu Val Arg His
        195   200   205

Tyr Thr Asn Ala Ser Asp Gly Leu Cys Thr Arg Leu Ser Arg Pro Cys
    210   215   220

Gln Thr Gln Lys Pro Gln Lys Pro Trp Trp Glu Asp Glu Trp Glu Val
225   230   235   240

Pro Arg Glu Thr Leu Lys Leu Val Glu Arg Leu Gly Ala Gly Gln Phe
                    245   250   255

Gly Glu Val Trp Met Gly Tyr Tyr Asn Gly His Thr Lys Val Ala Val
              260   265   270

Lys Ser Leu Lys Gln Gly Ser Met Ser Pro Asp Ala Phe Leu Ala Glu
          275   280   285

Ala Asn Leu Met Lys Gln Leu Gln His Gln Arg Leu Val Arg Leu Tyr
    290   295   300

Ala Val Val Thr Gln Glu Pro Ile Tyr Ile Ile Thr Glu Tyr Met Glu
305   310   315   320

Asn Gly Ser Leu Val Asp Phe Leu Lys Thr Pro Ser Gly Ile Lys Leu
              325   330   335

Thr Ile Asn Lys Leu Leu Asp Met Ala Ala Gln Ile Ala Glu Gly Met
          340   345   350

Ala Phe Ile Glu Glu Arg Asn Tyr Ile His Arg Asp Leu Arg Ala Ala
        355   360   365

Asn Ile Leu Val Ser Asp Thr Leu Ser Cys Lys Ile Ala Asp Phe Gly
370   375   380

Leu Ala Arg Leu Ile Glu Asp Asn Glu Tyr Thr Ala Arg Glu Gly Ala
385   390   395   400

Lys Phe Pro Ile Lys Trp Thr Ala Pro Glu Ala Ile Asn Tyr Gly Thr
              405   410   415

Phe Thr Ile Lys Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Thr Glu
          420   425   430

Ile Val Thr His Gly Arg Ile Pro Tyr Pro Gly Met Thr Asn Pro Glu
          435   440   445

Val Ile Gln Asn Leu Glu Arg Gly Tyr Arg Met Val Arg Pro Asp Asn
    450   455   460

Cys Pro Glu Glu Leu Tyr Gln Leu Met Arg Leu Cys Trp Lys Glu Arg
465   470   475   480

805

```
Pro Glu Asp Arg Pro Thr Phe Asp Tyr Leu Arg Ser Val Leu Glu Asp
            485                 490                 495

Phe Phe Thr Ala Thr Glu Gly Gln Tyr Gln Pro Gln Pro
            500                 505
```

<210> 2468
<211> 399 `
<212> PRT
<213> Homo sapiens

<400> 2468

```
Met Pro Gln Leu Ser Gly Gly Gly Gly Gly Gly Gly Asp Pro Glu
1               5               10              15

Leu Cys Ala Thr Asp Glu Met Ile Pro Phe Lys Asp Glu Gly Asp Pro
            20              25              30

Gln Lys Glu Lys Ile Phe Ala Glu Ile Ser His Pro Glu Glu Glu Gly
        35              40              45

Asp Leu Ala Asp Ile Lys Ser Ser Leu Val Asn Glu Ser Glu Ile Ile
    50              55              60

Pro Ala Ser Asn Gly His Glu Val Ala Arg Gln Ala Gln Thr Ser Gln
65              70              75              80

Glu Pro Tyr His Asp Lys Ala Arg Glu His Pro Asp Asp Gly Lys His
            85              90              95

Pro Asp Gly Gly Leu Tyr Asn Lys Gly Pro Ser Tyr Ser Ser Tyr Ser
            100             105             110

Gly Tyr Ile Met Met Pro Asn Met Asn Asn Asp Pro Tyr Met Ser Asn
        115             120             125

Gly Ser Leu Ser Pro Pro Ile Pro Arg Thr Ser Asn Lys Val Pro Val
    130             135             140

Val Gln Pro Ser His Ala Val His Pro Leu Thr Pro Leu Ile Thr Tyr
145             150             155             160

Ser Asp Glu His Phe Ser Pro Gly Ser His Pro Ser His Ile Pro Ser
            165             170             175

Asp Val Asn Ser Lys Gln Gly Met Ser Arg His Pro Pro Ala Pro Asp
```

```
            180                 185                    190
```

Ile Pro Thr Phe Tyr Pro Leu Ser Pro Gly Gly Val Gly Gln Ile Thr
    195   200   205

Pro Pro Leu Gly Trp Gln Gly Gln Pro Val Tyr Pro Ile Thr Gly Gly
    210   215   220

Phe Arg Gln Pro Tyr Pro Ser Ser Leu Ser Val Asp Thr Ser Met Ser
225   230   235   240

Arg Phe Ser His His Met Ile Pro Gly Pro Pro Gly Pro His Thr Thr
                245   250   255

Gly Ile Pro His Pro Ala Ile Val Thr Pro Gln Val Lys Gln Glu His
            260   265   270

Pro His Thr Asp Ser Asp Leu Met His Val Lys Pro Gln His Glu Gln
    275   280   285

Arg Lys Glu Gln Glu Pro Lys Arg Pro His Ile Lys Lys Pro Leu Asn
    290   295   300

Ala Phe Met Leu Tyr Met Lys Glu Met Arg Ala Asn Val Val Ala Glu
305   310   315   320

Cys Thr Leu Lys Glu Ser Ala Ala Ile Asn Gln Ile Leu Gly Arg Arg
                325   330   335

Trp His Ala Leu Ser Arg Glu Glu Gln Ala Lys Tyr Tyr Glu Leu Ala
                340   345   350

Arg Lys Glu Arg Gln Leu His Met Gln Leu Tyr Pro Gly Trp Ser Ala
            355   360   365

Arg Asp Asn Tyr Gly Lys Lys Lys Arg Lys Arg Glu Lys Leu Gln
    370   375   380

Glu Ser Ala Ser Gly Thr Gly Pro Arg Met Thr Ala Ala Tyr Ile
385   390   395

```
<210>  2469
<211>  335
<212>  PRT
<213>  Homo sapiens

<400>  2469
```

```
Met Gly His Pro Pro Leu Leu Pro Leu Leu Leu Leu Leu His Thr Cys
1               5               10                  15

Val Pro Ala Ser Trp Gly Leu Arg Cys Met Gln Cys Lys Thr Asn Gly
            20                  25                  30

Asp Cys Arg Val Glu Glu Cys Ala Leu Gly Gln Asp Leu Cys Arg Thr
            35                  40                  45

Thr Ile Val Arg Leu Trp Glu Glu Gly Glu Glu Leu Glu Leu Val Glu
        50                  55                  60

Lys Ser Cys Thr His Ser Glu Lys Thr Asn Arg Thr Leu Ser Tyr Arg
65              70                  75                  80

Thr Gly Leu Lys Ile Thr Ser Leu Thr Glu Val Val Cys Gly Leu Asp
                85                  90                  95

Leu Cys Asn Gln Gly Asn Ser Gly Arg Ala Val Thr Tyr Ser Arg Ser
            100                 105                 110

Arg Tyr Leu Glu Cys Ile Ser Cys Gly Ser Ser Asp Met Ser Cys Glu
        115                 120                 125

Arg Gly Arg His Gln Ser Leu Gln Cys Arg Ser Pro Glu Glu Gln Cys
    130                 135                 140

Leu Asp Val Val Thr His Trp Ile Gln Glu Gly Glu Glu Gly Arg Pro
145                 150                 155                 160

Lys Asp Asp Arg His Leu Arg Gly Cys Gly Tyr Leu Pro Gly Cys Pro
                165                 170                 175

Gly Ser Asn Gly Phe His Asn Asn Asp Thr Phe His Phe Leu Lys Cys
            180                 185                 190

Cys Asn Thr Thr Lys Cys Asn Glu Gly Pro Ile Leu Glu Leu Glu Asn
            195                 200                 205

Leu Pro Gln Asn Gly Arg Gln Cys Tyr Ser Cys Lys Gly Asn Ser Thr
    210                 215                 220

His Gly Cys Ser Ser Glu Glu Thr Phe Leu Ile Asp Cys Arg Gly Pro
225                 230                 235                 240
```

```
    Met Asn Gln Cys Leu Val Ala Thr Gly Thr His Glu Pro Lys Asn Gln
                    245                 250                 255


    Ser Tyr Met Val Arg Gly Cys Ala Thr Ala Ser Met Cys Gln His Ala
                    260                 265                 270


    His Leu Gly Asp Ala Phe Ser Met Asn His Ile Asp Val Ser Cys Cys
                    275                 280                 285


    Thr Lys Ser Gly Cys Asn His Pro Asp Leu Asp Val Gln Tyr Arg Ser
                290                 295                 300


    Gly Ala Ala Pro Gln Pro Gly Pro Ala His Leu Ser Leu Thr Ile Thr
    305                 310                 315                 320


    Leu Leu Met Thr Ala Arg Leu Trp Gly Gly Thr Leu Leu Trp Thr
                    325                 330                 335
```

<210> 2470
<211> 285
<212> PRT
<213> Homo sapiens

<400> 2470

```
    Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
    1               5                   10                  15


    Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
                    20                  25                  30


    Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
                    35                  40                  45


    Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
                50                  55                  60


    Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
    65                  70                  75                  80


    Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
                    85                  90                  95


    Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
                    100                 105                 110


    Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
                    115                 120                 125
```

```
Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
    130                 135                 140

Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
145                 150                 155                 160

Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
            165                 170                 175

Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
        180                 185                 190

Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
        195                 200                 205

Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
    210                 215                 220

Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
225                 230                 235                 240

Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
            245                 250                 255

Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
        260                 265                 270

Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
        275                 280                 285


<210>  2471
<211>  99
<212>  PRT
<213>  Homo sapiens

<400>  2471

Met Thr Ser Lys Leu Ala Val Ala Leu Leu Ala Ala Phe Leu Ile Ser
1                   5                   10                  15

Ala Ala Leu Cys Glu Gly Ala Val Leu Pro Arg Ser Ala Lys Glu Leu
            20                  25                  30

Arg Cys Gln Cys Ile Lys Thr Tyr Ser Lys Pro Phe His Pro Lys Phe
        35                  40                  45
```

```
Ile Lys Glu Leu Arg Val Ile Glu Ser Gly Pro His Cys Ala Asn Thr
    50                  55                  60

Glu Ile Ile Val Lys Leu Ser Asp Gly Arg Glu Leu Cys Leu Asp Pro
65                  70                  75                  80

Lys Glu Asn Trp Val Gln Arg Val Val Glu Lys Phe Leu Lys Arg Ala
                85                  90                  95

Glu Asn Ser
```

```
<210>  2472
<211>  247
<212>  PRT
<213>  Homo sapiens

<400>  2472
```

```
Met Gln Pro Ile Leu Leu Leu Leu Ala Phe Leu Leu Leu Pro Arg Ala
1               5                   10                  15

Asp Ala Gly Glu Ile Ile Gly Gly His Glu Ala Lys Pro His Ser Arg
                20                  25                  30

Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu Lys Arg
            35                  40                  45

Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala Ala His
    50                  55                  60

Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn Ile Lys
65                  70                  75                  80

Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro Ile Pro
                85                  90                  95

His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met Leu Leu
            100                 105                 110

Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro Leu Arg
        115                 120                 125

Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys Ser Val
        130                 135                 140

Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His Thr Leu
145                 150                 155                 160
```

Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu Ser Asp
            165   170   175

Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly Asp Pro
            180   185   190

Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro Leu Val
            195   200   205

Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn Asn Gly
    210   215   220

Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His Trp Ile
225   230   235   240

Lys Lys Thr Met Lys Arg Tyr
                245

<210> 2473
<211> 281
<212> PRT
<213> Homo sapiens

<400> 2473

Met Gln Gln Pro Phe Asn Tyr Pro Tyr Pro Gln Ile Tyr Trp Val Asp
1   5   10   15

Ser Ser Ala Ser Ser Pro Trp Ala Pro Pro Gly Thr Val Leu Pro Cys
            20   25   30

Pro Thr Ser Val Pro Arg Arg Pro Gly Gln Arg Arg Pro Pro Pro Pro
            35   40   45

Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Leu Pro
    50   55   60

Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly
65   70   75   80

Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly
            85   90   95

Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Ala
            100   105   110

812

```
Glu  Leu  Arg  Glu  Ser  Thr  Ser  Gln  Met  His  Thr  Ala  Ser  Ser  Leu  Glu
          115                      120                 125
```

```
Lys  Gln  Ile  Gly  His  Pro  Ser  Pro  Pro  Pro  Glu  Lys  Lys  Glu  Leu  Arg
          130                 135                      140
```

```
Lys  Val  Ala  His  Leu  Thr  Gly  Lys  Ser  Asn  Ser  Arg  Ser  Met  Pro  Leu
145                      150                      155                      160
```

```
Glu  Trp  Glu  Asp  Thr  Tyr  Gly  Ile  Val  Leu  Leu  Ser  Gly  Val  Lys  Tyr
                    165                      170                      175
```

```
Lys  Lys  Gly  Gly  Leu  Val  Ile  Asn  Glu  Thr  Gly  Leu  Tyr  Phe  Val  Tyr
               180                      185                      190
```

```
Ser  Lys  Val  Tyr  Phe  Arg  Gly  Gln  Ser  Cys  Asn  Asn  Leu  Pro  Leu  Ser
          195                      200                      205
```

```
His  Lys  Val  Tyr  Met  Arg  Asn  Ser  Lys  Tyr  Pro  Gln  Asp  Leu  Val  Met
          210                      215                      220
```

```
Met  Glu  Gly  Lys  Met  Met  Ser  Tyr  Cys  Thr  Thr  Gly  Gln  Met  Trp  Ala
225                      230                      235                      240
```

```
Arg  Ser  Ser  Tyr  Leu  Gly  Ala  Val  Phe  Asn  Leu  Thr  Ser  Ala  Asp  His
               245                      250                      255
```

```
Leu  Tyr  Val  Asn  Val  Ser  Glu  Leu  Ser  Leu  Val  Asn  Phe  Glu  Glu  Ser
               260                      265                      270
```

```
Gln  Thr  Phe  Phe  Gly  Leu  Tyr  Lys  Leu
          275                      280
```

```
<210>   2474
<211>   830
<212>   PRT
<213>   Homo sapiens

<400>   2474
```

```
Met  Gly  Ser  Met  Phe  Arg  Ser  Glu  Glu  Val  Ala  Leu  Val  Gln  Leu  Phe
1              5                        10                       15
```

```
Leu  Pro  Thr  Ala  Ala  Ala  Tyr  Thr  Cys  Val  Ser  Arg  Leu  Gly  Glu  Leu
          20                       25                       30
```

```
Gly  Leu  Val  Glu  Phe  Arg  Asp  Leu  Asn  Ala  Ser  Val  Ser  Ala  Phe  Gln
          35                       40                       45
```

Arg Arg Phe Val Val Asp Val Arg Arg Cys Glu Glu Leu Glu Lys Thr
    50   55   60

Phe Thr Phe Leu Gln Glu Glu Val Arg Arg Ala Gly Leu Val Leu Pro
65   70   75   80

Pro Pro Lys Gly Arg Leu Pro Ala Pro Pro Arg Asp Leu Leu Arg
            85   90   95

Ile Gln Glu Glu Thr Glu Arg Leu Ala Gln Glu Leu Arg Asp Val Arg
        100   105   110

Gly Asn Gln Gln Ala Leu Arg Ala Gln Leu His Gln Leu Gln Leu His
    115   120   125

Ala Ala Val Leu Arg Gln Gly His Glu Pro Gln Leu Ala Ala Ala His
    130   135   140

Thr Asp Gly Ala Ser Glu Arg Thr Pro Leu Leu Gln Ala Pro Gly Gly
145   150   155   160

Pro His Gln Asp Leu Arg Val Asn Phe Val Ala Gly Ala Val Glu Pro
            165   170   175

His Lys Ala Pro Ala Leu Glu Arg Leu Leu Trp Arg Ala Cys Arg Gly
            180   185   190

Phe Leu Ile Ala Ser Phe Arg Glu Leu Glu Gln Pro Leu Glu His Pro
        195   200   205

Val Thr Gly Glu Pro Ala Thr Trp Met Thr Phe Leu Ile Ser Tyr Trp
    210   215   220

Gly Glu Gln Ile Gly Gln Lys Ile Arg Lys Ile Thr Asp Cys Phe His
225   230   235   240

Cys His Val Phe Pro Phe Leu Gln Gln Glu Glu Ala Arg Leu Gly Ala
            245   250   255

Leu Gln Gln Leu Gln Gln Gln Ser Gln Glu Leu Gln Glu Val Leu Gly
        260   265   270

Glu Thr Glu Arg Phe Leu Ser Gln Val Leu Gly Arg Val Leu Gln Leu
    275   280   285

Leu Pro Pro Gly Gln Val Gln Val His Lys Met Lys Ala Val Tyr Leu
    290   295   300

Ala Leu Asn Gln Cys Ser Val Ser Thr Thr His Lys Cys Leu Ile Ala
305   310   315   320

Glu Ala Trp Cys Ser Val Arg Asp Leu Pro Ala Leu Gln Glu Ala Leu
                325   330   335

Arg Asp Ser Ser Met Glu Glu Gly Val Ser Ala Val Ala His Arg Ile
                340   345   350

Pro Cys Arg Asp Met Pro Pro Thr Leu Ile Arg Thr Asn Arg Phe Thr
            355   360   365

Ala Ser Phe Gln Gly Ile Val Asp Ala Tyr Gly Val Gly Arg Tyr Gln
    370   375   380

Glu Val Asn Pro Ala Pro Tyr Thr Ile Ile Thr Phe Pro Phe Leu Phe
385   390   395   400

Ala Val Met Phe Gly Asp Val Gly His Gly Leu Leu Met Phe Leu Phe
            405   410   415

Ala Leu Ala Met Val Leu Ala Glu Asn Arg Pro Ala Val Lys Ala Ala
            420   425   430

Gln Asn Glu Ile Trp Gln Thr Phe Phe Arg Gly Arg Tyr Leu Leu Leu
            435   440   445

Leu Met Gly Leu Phe Ser Ile Tyr Thr Gly Phe Ile Tyr Asn Glu Cys
    450   455   460

Phe Ser Arg Ala Thr Ser Ile Phe Pro Ser Gly Trp Ser Val Ala Ala
465   470   475   480

Met Ala Asn Gln Ser Gly Trp Ser Asp Ala Phe Leu Ala Gln His Thr
            485   490   495

Met Leu Thr Leu Asp Pro Asn Val Thr Gly Val Phe Leu Gly Pro Tyr
            500   505   510

Pro Phe Gly Ile Asp Pro Ile Trp Ser Leu Ala Ala Asn His Leu Ser
    515   520   525

```
Phe Leu Asn Ser Phe Lys Met Lys Met Ser Val Ile Leu Gly Val Val
    530             535             540

His Met Ala Phe Gly Val Val Leu Gly Val Phe Asn His Val His Phe
545             550             555                 560

Gly Gln Arg His Arg Leu Leu Leu Glu Thr Leu Pro Glu Leu Thr Phe
                565             570                 575

Leu Leu Gly Leu Phe Gly Tyr Leu Val Phe Leu Val Ile Tyr Lys Trp
            580             585                 590

Leu Cys Val Trp Ala Ala Arg Ala Ala Ser Ala Pro Ser Ile Leu Ile
            595             600             605

His Phe Ile Asn Met Phe Leu Phe Ser His Ser Pro Ser Asn Arg Leu
    610             615             620

Leu Tyr Pro Arg Gln Glu Val Val Gln Ala Thr Leu Val Val Leu Ala
625             630             635                 640

Leu Ala Met Val Pro Ile Leu Leu Leu Gly Thr Pro Leu His Leu Leu
            645             650             655

His Arg His Arg Arg Arg Leu Arg Arg Arg Pro Ala Asp Arg Gln Glu
            660             665             670

Glu Asn Lys Ala Gly Leu Leu Asp Leu Pro Asp Ala Ser Val Asn Gly
        675             680             685

Trp Ser Ser Asp Glu Glu Lys Ala Gly Gly Leu Asp Asp Glu Glu Glu
690             695             700

Ala Glu Leu Val Pro Ser Glu Val Leu Met His Gln Ala Ile His Thr
705             710             715                 720

Ile Glu Phe Cys Leu Gly Cys Val Ser Asn Thr Ala Ser Tyr Leu Arg
            725             730             735

Leu Trp Ala Leu Ser Leu Ala His Ala Gln Leu Ser Glu Val Leu Trp
        740             745             750

Ala Met Val Met Arg Ile Gly Leu Gly Leu Gly Arg Glu Val Gly Val
        755             760             765

Ala Ala Val Val Leu Val Pro Ile Phe Ala Ala Phe Ala Val Met Thr
```

```
        770                      775                      780
```

```
Val Ala Ile Leu Leu Val Met Glu Gly Leu Ser Ala Phe Leu His Ala
785                 790                 795                 800
```

```
Leu Arg Leu His Trp Val Glu Phe Gln Asn Lys Phe Tyr Ser Gly Thr
                805                 810                 815
```

```
Gly Tyr Lys Leu Ser Pro Phe Thr Phe Ala Ala Thr Asp Asp
            820                 825                 830
```

```
<210>  2475
<211>  555
<212>  PRT
<213>  Homo sapiens
```

```
<400>  2475
```

```
Met Ala Ala Arg Leu Leu Leu Leu Gly Ile Leu Leu Leu Leu Leu Pro
1               5                   10                  15
```

```
Leu Pro Val Pro Ala Pro Cys His Thr Ala Ala Arg Ser Glu Cys Lys
            20                  25                  30
```

```
Arg Ser His Lys Phe Val Pro Gly Ala Trp Leu Ala Gly Glu Gly Val
            35                  40                  45
```

```
Asp Val Thr Ser Leu Arg Arg Ser Gly Ser Phe Pro Val Asp Thr Gln
        50                  55                  60
```

```
Arg Phe Leu Arg Pro Asp Gly Thr Cys Thr Leu Cys Glu Asn Ala Leu
65                  70                  75                  80
```

```
Gln Glu Gly Thr Leu Gln Arg Leu Pro Leu Ala Leu Thr Asn Trp Arg
                85                  90                  95
```

```
Ala Gln Gly Ser Gly Cys Gln Arg His Val Thr Arg Ala Lys Val Ser
            100                 105                 110
```

```
Ser Thr Glu Ala Val Ala Arg Asp Ala Ala Arg Ser Ile Arg Asn Asp
            115                 120                 125
```

```
Trp Lys Val Gly Leu Asp Val Thr Pro Lys Pro Thr Ser Asn Val His
    130                 135                 140
```

```
Val Ser Val Ala Gly Ser His Ser Gln Ala Ala Asn Phe Ala Ala Gln
145                 150                 155                 160
```

Lys Thr His Gln Asp Gln Tyr Ser Phe Ser Thr Asp Thr Val Glu Cys
              165   170   175

Arg Phe Tyr Ser Phe His Val Val His Thr Pro Pro Leu His Pro Asp
              180   185   190

Phe Lys Arg Ala Leu Gly Asp Leu Pro His His Phe Asn Ala Ser Thr
              195   200   205

Gln Pro Ala Tyr Leu Arg Leu Ile Ser Asn Tyr Gly Thr His Phe Ile
    210   215   220

Arg Ala Val Glu Leu Gly Gly Arg Ile Ser Ala Leu Thr Ala Leu Arg
225   230   235   240

Thr Cys Glu Leu Ala Leu Glu Gly Leu Thr Asp Asn Glu Val Glu Asp
              245   250   255

Cys Leu Thr Val Glu Ala Gln Val Asn Ile Gly Ile His Gly Ser Ile
              260   265   270

Ser Ala Glu Ala Lys Ala Cys Glu Glu Lys Lys Lys His Lys Met
              275   280   285

Thr Ala Ser Phe His Gln Thr Tyr Arg Glu Arg His Ser Glu Val Val
    290   295   300

Gly Gly His His Thr Ser Ile Asn Asp Leu Leu Phe Gly Ile Gln Ala
305   310   315   320

Gly Pro Glu Gln Tyr Ser Ala Trp Val Asn Ser Val Pro Gly Ser Pro
              325   330   335

Gly Leu Val Asp Tyr Thr Leu Glu Pro Leu His Val Leu Leu Asp Ser
              340   345   350

Gln Asp Pro Arg Arg Glu Ala Leu Arg Arg Ala Leu Ser Gln Tyr Leu
              355   360   365

Thr Asp Arg Ala Arg Trp Arg Asp Cys Ser Arg Pro Cys Pro Pro Gly
    370   375   380

Arg Gln Lys Ser Pro Arg Asp Pro Cys Gln Cys Val Cys His Gly Ser
385   390   395   400

818

Ala Val Thr Thr Gln Asp Cys Cys Pro Arg Gln Arg Gly Leu Ala Gln
            405   410   415

Leu Glu Val Thr Phe Ile Gln Ala Trp Ser Leu Trp Gly Asp Trp Phe
            420   425   430

Thr Ala Thr Asp Ala Tyr Val Lys Leu Phe Phe Gly Gly Gln Glu Leu
            435   440   445

Arg Thr Ser Thr Val Trp Asp Asn Asn Asn Pro Ile Trp Ser Val Arg
    450   455   460

Leu Asp Phe Gly Asp Val Leu Leu Ala Thr Gly Gly Pro Leu Arg Leu
465   470   475   480

Gln Val Trp Asp Gln Asp Ser Gly Arg Asp Asp Asp Leu Leu Gly Thr
            485   490   495

Cys Asp Gln Ala Pro Lys Ser Gly Ser His Glu Val Arg Cys Asn Leu
            500   505   510

Asn His Gly His Leu Lys Phe Arg Tyr His Ala Arg Cys Leu Pro His
            515   520   525

Leu Gly Gly Gly Thr Cys Leu Asp Tyr Val Pro Gln Met Leu Leu Gly
    530   535   540

Glu Pro Pro Gly Asn Arg Ser Gly Ala Val Trp
545   550   555

<210> 2476
<211> 153
<212> PRT
<213> Homo sapiens

<400> 2476

Met Gly Leu Thr Ser Gln Leu Leu Pro Pro Leu Phe Phe Leu Leu Ala
1   5   10   15

Cys Ala Gly Asn Phe Val His Gly His Lys Cys Asp Ile Thr Leu Gln
            20   25   30

Glu Ile Ile Lys Thr Leu Asn Ser Leu Thr Glu Gln Lys Thr Leu Cys
            35   40   45

Thr Glu Leu Thr Val Thr Asp Ile Phe Ala Ala Ser Lys Asn Thr Thr
    50   55   60

                                    819

```
Glu Lys Glu Thr Phe Cys Arg Ala Ala Thr Val Leu Arg Gln Phe Tyr
65                   70                  75                  80


Ser His His Glu Lys Asp Thr Arg Cys Leu Gly Ala Thr Ala Gln Gln
                85                  90                  95


Phe His Arg His Lys Gln Leu Ile Arg Phe Leu Lys Arg Leu Asp Arg
            100                 105                 110


Asn Leu Trp Gly Leu Ala Gly Leu Asn Ser Cys Pro Val Lys Glu Ala
            115                 120                 125


Asn Gln Ser Thr Leu Glu Asn Phe Leu Glu Arg Leu Lys Thr Ile Met
        130                 135                 140


Arg Glu Lys Tyr Ser Lys Cys Ser Ser
145                 150
```

```
<210>  2477
<211>  146
<212>  PRT
<213>  Homo sapiens

<400>  2477
```

```
Met His Pro Leu Leu Asn Pro Leu Leu Leu Ala Leu Gly Leu Met Ala
1               5                   10                  15


Leu Leu Leu Thr Thr Val Ile Ala Leu Thr Cys Leu Gly Gly Phe Ala
            20                  25                  30


Ser Pro Gly Pro Val Pro Pro Ser Thr Ala Leu Arg Glu Leu Ile Glu
            35                  40                  45


Glu Leu Val Asn Ile Thr Gln Asn Gln Lys Ala Pro Leu Cys Asn Gly
        50                  55                  60


Ser Met Val Trp Ser Ile Asn Leu Thr Ala Gly Met Tyr Cys Ala Ala
65                  70                  75                  80


Leu Glu Ser Leu Ile Asn Val Ser Gly Cys Ser Ala Ile Glu Lys Thr
                85                  90                  95


Gln Arg Met Leu Ser Gly Phe Cys Pro His Lys Val Ser Ala Gly Gln
            100                 105                 110
```

```
Phe Ser Ser Leu His Val Arg Asp Thr Lys Ile Glu Val Ala Gln Phe
        115                 120                 125

Val Lys Asp Leu Leu Leu His Leu Lys Lys Leu Phe Arg Glu Gly Gln
        130                 135                 140

Phe Asn
145


<210>  2478
<211>  223
<212>  PRT
<213>  Homo sapiens

<400>  2478

Met Ala Cys Leu Gly Phe Gln Arg His Lys Ala Gln Leu Asn Leu Ala
1               5                   10                  15


Thr Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro
            20                  25                  30


Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala
        35                  40                  45


Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly
    50                  55                  60


Lys Ala Thr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln
65                  70                  75                  80


Val Thr Glu Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr
                85                  90                  95


Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val
        100                 105                 110


Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile
        115                 120                 125


Cys Lys Val Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly
        130                 135                 140


Asn Gly Thr Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser
145                 150                 155                 160


Asp Phe Leu Leu Trp Ile Leu Ala Ala Val Ser Ser Gly Leu Phe Phe
            165                 170                 175
```

Tyr Ser Phe Leu Leu Thr Ala Val Ser Leu Ser Lys Met Leu Lys Lys
        180   185   190

Arg Ser Pro Leu Thr Thr Gly Val Tyr Val Lys Met Pro Pro Thr Glu
        195   200   205

Pro Glu Cys Glu Lys Gln Phe Gln Pro Tyr Phe Ile Pro Ile Asn
    210   215   220

<210> 2479
<211> 235
<212> PRT
<213> Homo sapiens

<400> 2479

Met Ala Leu Pro Val Thr Ala Leu Leu Leu Pro Leu Ala Leu Leu Leu
1   5   10   15

His Ala Ala Arg Pro Ser Gln Phe Arg Val Ser Pro Leu Asp Arg Thr
        20   25   30

Trp Asn Leu Gly Glu Thr Val Glu Leu Lys Cys Gln Val Leu Leu Ser
        35   40   45

Asn Pro Thr Ser Gly Cys Ser Trp Leu Phe Gln Pro Arg Gly Ala Ala
    50   55   60

Ala Ser Pro Thr Phe Leu Leu Tyr Leu Ser Gln Asn Lys Pro Lys Ala
65   70   75   80

Ala Glu Gly Leu Asp Thr Gln Arg Phe Ser Gly Lys Arg Leu Gly Asp
            85   90   95

Thr Phe Val Leu Thr Leu Ser Asp Phe Arg Arg Glu Asn Glu Gly Tyr
            100   105   110

Tyr Phe Cys Ser Ala Leu Ser Asn Ser Ile Met Tyr Phe Ser His Phe
        115   120   125

Val Pro Val Phe Leu Pro Ala Lys Pro Thr Thr Thr Pro Ala Pro Arg
    130   135   140

Pro Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg
145   150   155   160

```
    Pro Glu Ala Cys Arg Pro Ala Ala Gly Gly Ala Val His Thr Arg Gly
                 165             170             175
```

```
    Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Thr
                 180             185             190
```

```
    Cys Gly Val Leu Leu Leu Ser Leu Val Ile Thr Leu Tyr Cys Asn His
                 195             200             205
```

```
    Arg Asn Arg Arg Arg Val Cys Lys Cys Pro Arg Pro Val Val Lys Ser
        210             215             220
```

```
    Gly Asp Lys Pro Ser Leu Ser Ala Arg Tyr Val
    225             230             235
```

```
<210>   2480
<211>   181
<212>   PRT
<213>   Homo sapiens

<400>   2480
```

```
Met Leu Leu Glu Pro Gly Arg Gly Cys Cys Ala Leu Ala Ile Leu Leu
1               5               10              15
```

```
Ala Ile Val Asp Ile Gln Ser Gly Gly Cys Ile Asn Ile Thr Ser Ser
            20              25              30
```

```
Ala Ser Gln Glu Gly Thr Arg Leu Asn Leu Ile Cys Thr Val Trp His
        35              40              45
```

```
Lys Lys Glu Glu Ala Glu Gly Phe Val Val Phe Leu Cys Lys Asp Arg
    50              55              60
```

```
Ser Gly Asp Cys Ser Pro Glu Thr Ser Leu Lys Gln Leu Arg Leu Lys
65              70              75              80
```

```
Arg Asp Pro Gly Ile Asp Gly Val Gly Glu Ile Ser Ser Gln Leu Met
            85              90              95
```

```
Phe Thr Ile Ser Gln Val Thr Pro Leu His Ser Gly Thr Tyr Gln Cys
            100             105             110
```

```
Cys Ala Arg Ser Gln Lys Ser Gly Ile Arg Leu Gln Gly His Phe Phe
        115             120             125
```

```
Ser Ile Leu Phe Thr Glu Thr Gly Asn Tyr Thr Val Thr Gly Leu Lys
    130             135             140
```

```
Gln Arg Gln His Leu Glu Phe Ser His Asn Glu Gly Thr Leu Ser Ser
145             150             155             160


Gly Phe Leu Gln Glu Lys Val Trp Val Met Leu Val Thr Ser Leu Val
                165             170             175


Ala Leu Gln Ala Leu
            180
```

```
<210>   2481
<211>   147
<212>   PRT
<213>   Homo sapiens

<400>   2481
```

```
Met Val His Leu Thr Pro Glu Glu Lys Ser Ala Val Thr Ala Leu Trp
1               5               10              15


Gly Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu
                20              25              30


Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp
            35              40              45


Leu Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His
    50              55              60


Gly Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp
65              70              75              80


Asn Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys
                85              90              95


Leu His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val
            100             105             110


Cys Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln
        115             120             125


Ala Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His
        130             135             140


Lys Tyr His
145
```

<210> 2482
<211> 259
<212> PRT
<213> Homo sapiens

<400> 2482

Met Ser Lys Tyr Lys Leu Ile Met Leu Arg His Gly Glu Gly Ala Trp
1   5   10   15

Asn Lys Glu Asn Arg Phe Cys Ser Trp Val Asp Gln Lys Leu Asn Ser
            20   25   30

Glu Gly Met Glu Glu Ala Arg Asn Cys Gly Lys Gln Leu Lys Ala Leu
        35   40   45

Asn Phe Glu Phe Asp Leu Val Phe Thr Ser Val Leu Asn Arg Ser Ile
    50   55   60

His Thr Ala Trp Leu Ile Leu Glu Glu Leu Gly Gln Glu Trp Val Pro
65   70   75   80

Val Glu Ser Ser Trp Arg Leu Asn Glu Arg His Tyr Gly Ala Leu Ile
                85   90   95

Gly Leu Asn Arg Glu Gln Met Ala Leu Asn His Gly Glu Glu Gln Val
            100   105   110

Arg Leu Trp Arg Arg Ser Tyr Asn Val Thr Pro Pro Pro Ile Glu Glu
        115   120   125

Ser His Pro Tyr Tyr Gln Glu Ile Tyr Asn Asp Arg Arg Tyr Lys Val
    130   135   140

Cys Asp Val Pro Leu Asp Gln Leu Pro Arg Ser Glu Ser Leu Lys Asp
145   150   155   160

Val Leu Glu Arg Leu Leu Pro Tyr Trp Asn Glu Arg Ile Ala Pro Glu
                165   170   175

Val Leu Arg Gly Lys Thr Ile Leu Ile Ser Ala His Gly Asn Ser Ser
            180   185   190

Arg Ala Leu Leu Lys His Leu Glu Gly Ile Ser Asp Glu Asp Ile Ile
        195   200   205

Asn Ile Thr Leu Pro Thr Gly Val Pro Ile Leu Leu Glu Leu Asp Glu
    210   215   220

Asn Leu Arg Ala Val Gly Pro His Gln Phe Leu Gly Asp Gln Glu Ala
225   230   235   240

Ile Gln Ala Ala Ile Lys Lys Val Glu Asp Gln Gly Lys Val Lys Gln
                245   250   255

Ala Lys Lys

<210> 2483
<211> 344
<212> PRT
<213> Homo sapiens

<400> 2483

Met Ser Ala Leu Ala Ala Arg Leu Leu Gln Pro Ala His Ser Cys Ser
1   5   10   15

Leu Arg Leu Arg Pro Phe His Leu Ala Ala Val Arg Asn Glu Ala Val
                20   25   30

Val Ile Ser Gly Arg Lys Leu Ala Gln Gln Ile Lys Gln Glu Val Arg
            35   40   45

Gln Glu Val Glu Glu Trp Val Ala Ser Gly Asn Lys Arg Pro His Leu
        50   55   60

Ser Val Ile Leu Val Gly Glu Asn Pro Ala Ser His Ser Tyr Val Leu
65   70   75   80

Asn Lys Thr Arg Ala Ala Ala Val Val Gly Ile Asn Ser Glu Thr Ile
                85   90   95

Met Lys Pro Ala Ser Ile Ser Glu Glu Glu Leu Leu Asn Leu Ile Asn
            100   105   110

Lys Leu Asn Asn Asp Asp Asn Val Asp Gly Leu Leu Val Gln Leu Pro
            115   120   125

Leu Pro Glu His Ile Asp Glu Arg Arg Ile Cys Asn Ala Val Ser Pro
        130   135   140

Asp Lys Asp Val Asp Gly Phe His Val Ile Asn Val Gly Arg Met Cys
145   150   155   160

```
Leu Asp Gln Tyr Ser Met Leu Pro Ala Thr Pro Trp Gly Val Trp Glu
                165             170             175

Ile Ile Lys Arg Thr Gly Ile Pro Thr Leu Gly Lys Asn Val Val Val
            180             185             190

Ala Gly Arg Ser Lys Asn Val Gly Met Pro Ile Ala Met Leu Leu His
            195             200             205

Thr Asp Gly Ala His Glu Arg Pro Gly Gly Asp Ala Thr Val Thr Ile
    210             215             220

Ser His Arg Tyr Thr Pro Lys Glu Gln Leu Lys Lys His Thr Ile Leu
225             230             235             240

Ala Asp Ile Val Ile Ser Ala Ala Gly Ile Pro Asn Leu Ile Thr Ala
                245             250             255

Asp Met Ile Lys Glu Gly Ala Ala Val Ile Asp Val Gly Ile Asn Arg
            260             265             270

Val His Asp Pro Val Thr Ala Lys Pro Lys Leu Val Gly Asp Val Asp
            275             280             285

Phe Glu Gly Val Arg Gln Lys Ala Gly Tyr Ile Thr Pro Val Pro Gly
            290             295             300

Gly Val Gly Pro Met Thr Val Ala Met Leu Met Lys Asn Thr Ile Ile
305             310             315             320

Ala Ala Lys Lys Val Leu Arg Leu Glu Glu Arg Glu Val Leu Lys Ser
            325             330             335

Lys Glu Leu Gly Val Ala Thr Asn
            340


<210>   2484
<211>   808
<212>   PRT
<213>   Homo sapiens

<400>   2484

Met Ala Glu Leu Leu Ala Ser Ala Gly Ser Ala Cys Ser Trp Asp Phe
1               5               10              15


Pro Arg Ala Pro Pro Ser Phe Pro Pro Ala Ala Ser Arg Gly Gly
            20              25              30
```

Leu Gly Gly Thr Arg Ser Phe Arg Pro His Arg Gly Ala Glu Ser Pro
        35   40   45

Arg Pro Gly Arg Asp Arg Asp Gly Val Arg Val Pro Met Ala Ser Ser
    50   55   60

Arg Cys Pro Ala Pro Arg Gly Cys Arg Cys Leu Pro Gly Ala Ser Leu
65   70   75   80

Ala Trp Leu Gly Thr Val Leu Leu Leu Ala Asp Trp Val Leu Leu
            85   90   95

Arg Thr Ala Leu Pro Arg Ile Phe Ser Leu Leu Val Pro Thr Ala Leu
        100   105   110

Pro Leu Leu Arg Val Trp Ala Val Gly Leu Ser Arg Trp Ala Val Leu
        115   120   125

Trp Leu Gly Ala Cys Gly Val Leu Arg Ala Thr Val Gly Ser Lys Ser
    130   135   140

Glu Asn Ala Gly Ala Gln Gly Trp Leu Ala Ala Leu Lys Pro Leu Ala
145   150   155   160

Ala Ala Leu Gly Leu Ala Leu Pro Gly Leu Ala Leu Phe Arg Glu Leu
            165   170   175

Ile Ser Trp Gly Ala Pro Gly Ser Ala Asp Ser Thr Arg Leu Leu His
            180   185   190

Trp Gly Ser His Pro Thr Ala Phe Val Val Ser Tyr Ala Ala Ala Leu
    195   200   205

Pro Ala Ala Ala Leu Trp His Lys Leu Gly Ser Leu Trp Val Pro Gly
    210   215   220

Gly Gln Gly Gly Ser Gly Asn Pro Val Arg Arg Leu Leu Gly Cys Leu
225   230   235   240

Gly Ser Glu Thr Arg Arg Leu Ser Leu Phe Leu Val Leu Val Val Leu
            245   250   255

Ser Ser Leu Gly Glu Met Ala Ile Pro Phe Phe Thr Gly Arg Leu Thr
        260   265   270

Asp Trp Ile Leu Gln Asp Gly Ser Ala Asp Thr Phe Thr Arg Asn Leu
        275   280   285

Thr Leu Met Ser Ile Leu Thr Ile Ala Ser Ala Val Leu Glu Phe Val
        290   295   300

Gly Asp Gly Ile Tyr Asn Asn Thr Met Gly His Val His Ser His Leu
305   310   315   320

Gln Gly Glu Val Phe Gly Ala Val Leu Arg Gln Glu Thr Glu Phe Phe
            325   330   335

Gln Gln Asn Gln Thr Gly Asn Ile Met Ser Arg Val Thr Glu Asp Thr
        340   345   350

Ser Thr Leu Ser Asp Ser Leu Ser Glu Asn Leu Ser Leu Phe Leu Trp
        355   360   365

Tyr Leu Val Arg Gly Leu Cys Leu Leu Gly Ile Met Leu Trp Gly Ser
    370   375   380

Val Ser Leu Thr Met Val Thr Leu Ile Thr Leu Pro Leu Leu Phe Leu
385   390   395   400

Leu Pro Lys Lys Val Gly Lys Trp Tyr Gln Leu Leu Glu Val Gln Val
            405   410   415

Arg Glu Ser Leu Ala Lys Ser Ser Gln Val Ala Ile Glu Ala Leu Ser
            420   425   430

Ala Met Pro Thr Val Arg Ser Phe Ala Asn Glu Glu Gly Glu Ala Gln
        435   440   445

Lys Phe Arg Glu Lys Leu Gln Glu Ile Lys Thr Leu Asn Gln Lys Glu
    450   455   460

Ala Val Ala Tyr Ala Val Asn Ser Trp Thr Thr Ser Ile Ser Gly Met
465   470   475   480

Leu Leu Lys Val Gly Ile Leu Tyr Ile Gly Gly Gln Leu Val Thr Ser
            485   490   495

Gly Ala Val Ser Ser Gly Asn Leu Val Thr Phe Val Leu Tyr Gln Met
        500   505   510

Gln Phe Thr Gln Ala Val Glu Val Leu Leu Ser Ile Tyr Pro Arg Val
        515   520   525

Gln Lys Ala Val Gly Ser Ser Glu Lys Ile Phe Glu Tyr Leu Asp Arg
        530   535   540

Thr Pro Arg Cys Pro Pro Ser Gly Leu Leu Thr Pro Leu His Leu Glu
545   550   555   560

Gly Leu Val Gln Phe Gln Asp Val Ser Phe Ala Tyr Pro Asn Arg Pro
                565   570   575

Asp Val Leu Val Leu Gln Gly Leu Thr Phe Thr Leu Arg Pro Gly Glu
                580   585   590

Val Thr Ala Leu Val Gly Pro Asn Gly Ser Gly Lys Ser Thr Val Ala
        595   600   605

Ala Leu Leu Gln Asn Leu Tyr Gln Pro Thr Gly Gly Gln Leu Leu Leu
        610   615   620

Asp Gly Lys Pro Leu Pro Gln Tyr Glu His Arg Tyr Leu His Arg Gln
625   630   635   640

Val Ala Ala Val Gly Gln Glu Pro Gln Val Phe Gly Arg Ser Leu Gln
                645   650   655

Glu Asn Ile Ala Tyr Gly Leu Thr Gln Lys Pro Thr Met Glu Glu Ile
        660   665   670

Thr Ala Ala Ala Val Lys Ser Gly Ala His Ser Phe Ile Ser Gly Leu
        675   680   685

Pro Gln Gly Tyr Asp Thr Glu Val Asp Glu Ala Gly Ser Gln Leu Ser
        690   695   700

Gly Gly Gln Arg Gln Ala Val Ala Leu Ala Arg Ala Leu Ile Arg Lys
705   710   715   720

Pro Cys Val Leu Ile Leu Asp Asp Ala Thr Ser Ala Leu Asp Ala Asn
                725   730   735

Ser Gln Leu Gln Val Glu Gln Leu Leu Tyr Glu Ser Pro Glu Arg Tyr
        740   745   750

Ser Arg Ser Val Leu Leu Ile Thr Gln His Leu Ser Leu Val Glu Gln

```
             755                    760                      765
```

```
   Ala Asp His Ile Leu Phe Leu Glu Gly Gly Ala Ile Arg Glu Gly Gly
       770                    775                      780

   Thr His Gln Gln Leu Met Glu Lys Lys Gly Cys Tyr Trp Ala Met Val
   785                    790                      795                      800

   Gln Ala Pro Ala Asp Ala Pro Glu
                   805
```

```
<210>  2485
<211>  453
<212>  PRT
<213>  Homo sapiens

<400>  2485
```

```
   Met Ala Arg Lys Val Val Ser Arg Lys Lys Ala Pro Ala Ser Pro
   1             5                    10                      15

   Gly Ala Gly Ser Asp Ala Gln Gly Pro Gln Phe Gly Trp Asp His Ser
                   20                    25                      30

   Leu His Lys Arg Lys Arg Leu Pro Pro Val Lys Arg Ser Leu Val Tyr
               35                    40                      45

   Tyr Leu Lys Asn Arg Glu Val Arg Leu Gln Asn Glu Thr Ser Tyr Ser
       50                    55                      60

   Arg Val Leu His Gly Tyr Ala Ala Gln Gln Leu Pro Ser Leu Leu Lys
   65                    70                    75                      80

   Glu Arg Glu Phe His Leu Gly Thr Leu Asn Lys Val Phe Ala Ser Gln
                   85                    90                      95

   Trp Leu Asn His Arg Gln Val Val Cys Gly Thr Lys Cys Asn Thr Leu
                   100                   105                   110

   Phe Val Val Asp Val Gln Thr Ser Gln Ile Thr Lys Ile Pro Ile Leu
               115                   120                   125

   Lys Asp Arg Glu Pro Gly Gly Val Thr Gln Gln Gly Cys Gly Ile His
       130                   135                   140

   Ala Ile Glu Leu Asn Pro Ser Arg Thr Leu Leu Ala Thr Gly Gly Asp
   145                   150                   155                   160
```

```
Asn Pro Asn Ser Leu Ala Ile Tyr Arg Leu Pro Thr Leu Asp Pro Val
             165             170             175


Cys Val Gly Asp Asp Gly His Lys Asp Trp Ile Phe Ser Ile Ala Trp
             180             185             190


Ile Ser Asp Thr Met Ala Val Ser Gly Ser Arg Asp Gly Ser Met Gly
             195             200             205


Leu Trp Glu Val Thr Asp Asp Val Leu Thr Lys Ser Asp Ala Arg His
     210             215             220


Asn Val Ser Arg Val Pro Val Tyr Ala His Ile Thr His Lys Ala Leu
225             230             235             240


Lys Asp Ile Pro Lys Glu Asp Thr Asn Pro Asp Asn Cys Lys Val Arg
             245             250             255


Ala Leu Ala Phe Asn Asn Lys Asn Lys Glu Leu Gly Ala Val Ser Leu
             260             265             270


Asp Gly Tyr Phe His Leu Trp Lys Ala Glu Asn Thr Leu Ser Lys Leu
             275             280             285


Leu Ser Thr Lys Leu Pro Tyr Cys Arg Glu Asn Val Cys Leu Ala Tyr
     290             295             300


Gly Ser Glu Trp Ser Val Tyr Ala Val Gly Ser Gln Ala His Val Ser
305             310             315             320


Phe Leu Asp Pro Arg Gln Pro Ser Tyr Asn Val Lys Ser Val Cys Ser
             325             330             335


Arg Glu Arg Gly Ser Gly Ile Arg Ser Val Ser Phe Tyr Glu His Ile
             340             345             350


Ile Thr Val Gly Thr Gly Gln Gly Ser Leu Leu Phe Tyr Asp Ile Arg
             355             360             365


Ala Gln Arg Phe Leu Glu Glu Arg Leu Ser Ala Cys Tyr Gly Ser Lys
             370             375             380


Pro Arg Leu Ala Gly Glu Asn Leu Lys Leu Thr Thr Gly Lys Gly Trp
385             390             395             400
```

832

```
Leu Asn His Asp Glu Thr Trp Arg Asn Tyr Phe Ser Asp Ile Asp Phe
            405             410             415


Phe Pro Asn Ala Val Tyr Thr His Cys Tyr Asp Ser Ser Gly Thr Lys
            420             425             430


Leu Phe Val Ala Gly Gly Pro Leu Pro Ser Gly Leu His Gly Asn Tyr
            435             440             445


Ala Gly Leu Trp Ser
    450
```

```
<210>   2486
<211>   352
<212>   PRT
<213>   Homo sapiens

<400>   2486
```

```
Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
1               5               10              15


Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
            20              25              30


Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr Ser Ile Ile
        35              40              45


Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
    50              55              60


Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
65              70              75              80


Ser Val Ala Asp Leu Leu Phe Val Ile Thr Leu Pro Phe Trp Ala Val
            85              90              95


Asp Ala Val Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
            100             105             110


His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
        115             120             125


Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
    130             135             140


Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
145             150             155             160
```

833

```
Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn
             165                 170             175

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
             180                 185             190

Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
             195                 200             205

Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys Ile Ile Ile Ser
     210                 215                 220

Lys Leu Ser His Ser Lys Gly His Gln Lys Arg Lys Ala Leu Lys Thr
225                 230                 235                 240

Thr Val Ile Leu Ile Leu Ala Phe Phe Ala Cys Trp Leu Pro Tyr Tyr
             245                 250                 255

Ile Gly Ile Ser Ile Asp Ser Phe Ile Leu Leu Glu Ile Ile Lys Gln
             260                 265                 270

Gly Cys Glu Phe Glu Asn Thr Val His Lys Trp Ile Ser Ile Thr Glu
             275                 280                 285

Ala Leu Ala Phe Phe His Cys Cys Leu Asn Pro Ile Leu Tyr Ala Phe
     290                 295                 300

Leu Gly Ala Lys Phe Lys Thr Ser Ala Gln His Ala Leu Thr Ser Val
305                 310                 315                 320

Ser Arg Gly Ser Ser Leu Lys Ile Leu Ser Lys Gly Lys Arg Gly Gly
             325                 330                 335

His Ser Ser Val Ser Thr Glu Ser Glu Ser Ser Ser Phe His Ser Ser
             340                 345                 350
```

```
<210> 2487
<211> 199
<212> PRT
<213> Homo sapiens

<400> 2487

Met Ser Ser Glu Asn Cys Phe Val Ala Glu Asn Ser Ser Leu His Pro
1                 5                 10                  15
```

```
Glu Ser Gly Gln Glu Asn Asp Ala Thr Ser Pro His Phe Ser Thr Arg
        20              25              30

His Glu Gly Ser Phe Gln Val Pro Val Leu Cys Ala Val Met Asn Val
        35              40              45

Val Phe Ile Thr Ile Leu Ile Ile Ala Leu Ile Ala Leu Ser Val Gly
    50              55              60

Gln Tyr Asn Cys Pro Gly Gln Tyr Thr Phe Ser Met Pro Ser Asp Ser
65              70              75              80

His Val Ser Ser Cys Ser Glu Asp Trp Val Gly Tyr Gln Arg Lys Cys
            85              90              95

Tyr Phe Ile Ser Thr Val Lys Arg Ser Trp Thr Ser Ala Gln Asn Ala
        100             105             110

Cys Ser Glu His Gly Ala Thr Leu Ala Val Ile Asp Ser Glu Lys Asp
        115             120             125

Met Asn Phe Leu Lys Arg Tyr Ala Gly Arg Glu Glu His Trp Val Gly
    130             135             140

Leu Lys Lys Glu Pro Gly His Pro Trp Lys Trp Ser Asn Gly Lys Glu
145             150             155             160

Phe Asn Asn Trp Phe Asn Val Thr Gly Ser Asp Lys Cys Val Phe Leu
            165             170             175

Lys Asn Thr Glu Val Ser Ser Met Glu Cys Glu Lys Asn Leu Tyr Trp
        180             185             190

Ile Cys Asn Lys Pro Tyr Lys
        195
```

<210> 2488
<211> 91
<212> PRT
<213> Homo sapiens

<400> 2488

```
Met Lys Val Ser Ala Ala Ala Leu Ala Val Ile Leu Ile Ala Thr Ala
1               5               10              15

Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro
        20              25              30
```

```
Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
        35              40              45

Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val Phe
    50              55              60

Val Thr Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
65              70              75              80

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
                85              90
```

<210> 2489
<211> 212
<212> PRT
<213> Homo sapiens

<400> 2489

```
Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu
1           5               10              15

Gly Leu Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro Val Pro Pro
        20              25              30

Gly Glu Asp Ser Lys Asp Val Ala Ala Pro His Arg Gln Pro Leu Thr
        35              40              45

Ser Ser Glu Arg Ile Asp Lys Gln Ile Arg Tyr Ile Leu Asp Gly Ile
    50              55              60

Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys Ser Asn Met Cys Glu Ser
65              70              75              80

Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu Asn Leu Pro Lys Met Ala
                85              90              95

Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe Asn Glu Glu Thr Cys Leu
            100             105             110

Val Lys Ile Ile Thr Gly Leu Leu Glu Phe Glu Val Tyr Leu Glu Tyr
        115             120             125

Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu Gln Ala Arg Ala Val Gln
    130             135             140
```

```
Met Ser Thr Lys Val Leu Ile Gln Phe Leu Gln Lys Lys Ala Lys Asn
145             150             155             160


Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr Thr Asn Ala Ser Leu Leu
                165             170             175


Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu Gln Asp Met Thr Thr His
            180             185             190


Leu Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser Leu Arg Ala
            195             200             205


Leu Arg Gln Met
    210
```

```
<210>  2490
<211>  153
<212>  PRT
<213>  Homo sapiens

<400>  2490

Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu
1               5               10              15


Val Thr Asn Ser Ala Pro Thr Ser Ser Thr Lys Lys Thr Gln Leu
            20              25              30


Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile
        35              40              45


Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe
        50              55              60


Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu
65              70              75              80


Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys
                85              90              95


Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
            100             105             110


Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala
            115             120             125


Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe
    130             135             140
```

```
Cys Gln Ser Ile Ile Ser Thr Leu Thr
145                 150
```

```
<210>  2491
<211>  231
<212>  PRT
<213>  Homo sapiens
```

```
<400>  2491
```

```
Met Gln Asp Glu Glu Arg Tyr Met Thr Leu Asn Val Gln Ser Lys Lys
1               5                   10                  15
```

```
Arg Ser Ser Ala Gln Thr Ser Gln Leu Thr Phe Lys Asp Tyr Ser Val
            20                  25                  30
```

```
Thr Leu His Trp Tyr Lys Ile Leu Leu Gly Ile Ser Gly Thr Val Asn
            35                  40                  45
```

```
Gly Ile Leu Thr Leu Thr Leu Ile Ser Leu Ile Leu Leu Val Ser Gln
        50                  55                  60
```

```
Gly Val Leu Leu Lys Cys Gln Lys Gly Ser Cys Ser Asn Ala Thr Gln
65                  70                  75                  80
```

```
Tyr Glu Asp Thr Gly Asp Leu Lys Val Asn Asn Gly Thr Arg Arg Asn
            85                  90                  95
```

```
Ile Ser Asn Lys Asp Leu Cys Ala Ser Arg Ser Ala Asp Gln Thr Val
            100                 105                 110
```

```
Leu Cys Gln Ser Glu Trp Leu Lys Tyr Gln Gly Lys Cys Tyr Trp Phe
            115                 120                 125
```

```
Ser Asn Glu Met Lys Ser Trp Ser Asp Ser Tyr Val Tyr Cys Leu Glu
        130                 135                 140
```

```
Arg Lys Ser His Leu Leu Ile Ile His Asp Gln Leu Glu Met Ala Phe
145                 150                 155                 160
```

```
Ile Gln Lys Asn Leu Arg Gln Leu Asn Tyr Val Trp Ile Gly Leu Asn
            165                 170                 175
```

```
Phe Thr Ser Leu Lys Met Thr Trp Thr Trp Val Asp Gly Ser Pro Ile
            180                 185                 190
```

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Asp Ser Lys Ile Phe Phe Ile Lys Gly Pro Ala Lys Glu Asn Ser Cys
        195   200   205

Ala Ala Ile Lys Glu Ser Lys Ile Phe Ser Glu Thr Cys Ser Ser Val
        210   215   220

Phe Lys Trp Ile Cys Gln Tyr
225   230

<210> 2492
<211> 512
<212> PRT
<213> Homo sapiens

<400> 2492

Met Gly Cys Ile Lys Ser Lys Gly Lys Asp Ser Leu Ser Asp Asp Gly
1   5   10   15

Val Asp Leu Lys Thr Gln Pro Val Arg Asn Thr Glu Arg Thr Ile Tyr
        20   25   30

Val Arg Asp Pro Thr Ser Asn Lys Gln Gln Arg Pro Val Pro Glu Ser
        35   40   45

Gln Leu Leu Pro Gly Gln Arg Phe Gln Thr Lys Asp Pro Glu Glu Gln
        50   55   60

Gly Asp Ile Val Val Ala Leu Tyr Pro Tyr Asp Gly Ile His Pro Asp
65   70   75   80

Asp Leu Ser Phe Lys Lys Gly Glu Lys Met Lys Val Leu Glu Glu His
                85   90   95

Gly Glu Trp Trp Lys Ala Lys Ser Leu Leu Thr Lys Lys Glu Gly Phe
        100   105   110

Ile Pro Ser Asn Tyr Val Ala Lys Leu Asn Thr Leu Glu Thr Glu Glu
        115   120   125

Trp Phe Phe Lys Asp Ile Thr Arg Lys Asp Ala Glu Arg Gln Leu Leu
        130   135   140

Ala Pro Gly Asn Ser Ala Gly Ala Phe Leu Ile Arg Glu Ser Glu Thr
145   150   155   160

Leu Lys Gly Ser Phe Ser Leu Ser Val Arg Asp Phe Asp Pro Val His
                165   170   175

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Gly Asp Val Ile Lys His Tyr Lys Ile Arg Ser Leu Asp Asn Gly Gly
              180   185   190

Tyr Tyr Ile Ser Pro Arg Ile Thr Phe Pro Cys Ile Ser Asp Met Ile
          195   200   205

Lys His Tyr Gln Lys Gln Ala Asp Gly Leu Cys Arg Arg Leu Glu Lys
      210   215   220

Ala Cys Ile Ser Pro Lys Pro Gln Lys Pro Trp Asp Lys Asp Ala Trp
225   230   235   240

Glu Ile Pro Arg Glu Ser Ile Lys Leu Val Lys Arg Leu Gly Ala Gly
              245   250   255

Gln Phe Gly Glu Val Trp Met Gly Tyr Tyr Asn Asn Ser Thr Lys Val
          260   265   270

Ala Val Lys Thr Leu Lys Pro Gly Thr Met Ser Val Gln Ala Phe Leu
      275   280   285

Glu Glu Ala Asn Leu Met Lys Thr Leu Gln His Asp Lys Leu Val Arg
290   295   300

Leu Tyr Ala Val Val Thr Arg Glu Glu Pro Ile Tyr Ile Ile Thr Glu
305   310   315   320

Tyr Met Ala Lys Gly Ser Leu Leu Asp Phe Leu Lys Ser Asp Glu Gly
              325   330   335

Gly Lys Val Leu Leu Pro Lys Leu Ile Asp Phe Ser Ala Gln Ile Ala
          340   345   350

Glu Gly Met Ala Tyr Ile Glu Arg Lys Asn Tyr Ile His Arg Asp Leu
          355   360   365

Arg Ala Ala Asn Val Leu Val Ser Glu Ser Leu Met Cys Lys Ile Ala
370   375   380

Asp Phe Gly Leu Ala Arg Val Ile Glu Asp Asn Glu Tyr Thr Ala Arg
385   390   395   400

Glu Gly Ala Lys Phe Pro Ile Lys Trp Thr Ala Pro Glu Ala Ile Asn
              405   410   415

840

```
Phe Gly Cys Phe Thr Ile Lys Ser Asp Val Trp Ser Phe Gly Ile Leu
        420                 425                 430

Leu Tyr Glu Ile Val Thr Tyr Gly Lys Ile Pro Tyr Pro Gly Arg Thr
        435                 440                 445

Asn Ala Asp Val Met Thr Ala Leu Ser Gln Gly Tyr Arg Met Pro Arg
    450                 455                 460

Val Glu Asn Cys Pro Asp Glu Leu Tyr Asp Ile Met Lys Met Cys Trp
465                 470                 475                 480

Lys Glu Lys Ala Glu Glu Arg Pro Thr Phe Asp Tyr Leu Gln Ser Val
                485                 490                 495

Leu Asp Asp Phe Tyr Thr Ala Thr Glu Gly Gln Tyr Gln Gln Gln Pro
                500                 505                 510
```

<210> 2493
<211> 272
<212> PRT
<213> Homo sapiens

<400> 2493

```
Met Asp Ser Tyr Leu Leu Met Trp Gly Leu Leu Thr Phe Ile Met Val
1               5               10                  15

Pro Gly Cys Gln Ala Glu Leu Cys Asp Asp Asp Pro Pro Glu Ile Pro
        20                  25                  30

His Ala Thr Phe Lys Ala Met Ala Tyr Lys Glu Gly Thr Met Leu Asn
        35                  40                  45

Cys Glu Cys Lys Arg Gly Phe Arg Arg Ile Lys Ser Gly Ser Leu Tyr
    50                  55                  60

Met Leu Cys Thr Gly Asn Ser Ser His Ser Ser Trp Asp Asn Gln Cys
65                  70                  75                  80

Gln Cys Thr Ser Ser Ala Thr Arg Asn Thr Thr Lys Gln Val Thr Pro
                85                  90                  95

Gln Pro Glu Glu Gln Lys Glu Arg Lys Thr Thr Glu Met Gln Ser Pro
            100                 105                 110

Met Gln Pro Val Asp Gln Ala Ser Leu Pro Gly His Cys Arg Glu Pro
```

                    115   120   125

   Pro Pro Trp Glu Asn Glu Ala Thr Glu Arg Ile Tyr His Phe Val Val
       130   135   140

   Gly Gln Met Val Tyr Tyr Gln Cys Val Gln Gly Tyr Arg Ala Leu His
       145   150   155   160

   Arg Gly Pro Ala Glu Ser Val Cys Lys Met Thr His Gly Lys Thr Arg
                   165   170   175

   Trp Thr Gln Pro Gln Leu Ile Cys Thr Gly Glu Met Glu Thr Ser Gln
                   180   185   190

   Phe Pro Gly Glu Glu Lys Pro Gln Ala Ser Pro Glu Gly Arg Pro Glu
           195   200   205

   Ser Glu Thr Ser Cys Leu Val Thr Thr Thr Asp Phe Gln Ile Gln Thr
       210   215   220

   Glu Met Ala Ala Thr Met Glu Thr Ser Ile Phe Thr Thr Glu Tyr Gln
   225   230   235   240

   Val Ala Val Ala Gly Cys Val Phe Leu Leu Ile Ser Val Leu Leu Leu
                   245   250   255

   Ser Gly Leu Thr Trp Gln Arg Arg Gln Arg Lys Ser Arg Arg Thr Ile
           260   265   270

   <210> 2494
   <211> 92
   <212> PRT
   <213> Homo sapiens

   <400> 2494

   Met Lys Leu Cys Val Thr Val Leu Ser Leu Leu Met Leu Val Ala Ala
   1   5   10   15

   Phe Cys Ser Pro Ala Leu Ser Ala Pro Met Gly Ser Asp Pro Pro Thr
                   20   25   30

   Ala Cys Cys Phe Ser Tyr Thr Ala Arg Lys Leu Pro Arg Asn Phe Val
               35   40   45

   Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val Val
       50   55   60

Phe Gln Thr Lys Arg Ser Lys Gln Val Cys Ala Asp Pro Ser Glu Ser
65   70   75   80

Trp Val Gln Glu Tyr Val Tyr Asp Leu Glu Leu Asn
                85   90

<210>   2495
<211>   532
<212>   PRT
<213>   Homo sapiens

<400>   2495

Met Met Met Val Arg Arg Gly Leu Leu Ala Trp Ile Ser Arg Val Val
1   5   10   15

Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr Met Leu
            20   25   30

Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu Pro Arg Ala
            35   40   45

Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val Leu Gln Glu Trp
        50   55   60

Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu Lys Arg Gln Ile Ala
65   70   75   80

Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser Glu Gln Leu Arg Asn Gly
                85   90   95

Gln Tyr Gln Ala Ser Asp Ala Ala Gly Leu Gly Leu Asp Arg Ser Pro
                100   105   110

Pro Glu Lys Thr Gln Ala Asp Leu Leu Ala Phe Leu His Ser Gln Val
        115   120   125

Asp Lys Ala Glu Val Asn Ala Gly Val Lys Leu Ala Thr Glu Tyr Ala
    130   135   140

Ala Val Pro Phe Asp Ser Phe Thr Leu Gln Lys Val Tyr Gln Leu Glu
145   150   155   160

Thr Gly Leu Thr Arg His Pro Glu Glu Lys Pro Val Arg Lys Asp Lys
                165   170   175

Arg Asp Glu Leu Val Glu Ala Ile Glu Ser Ala Leu Glu Thr Leu Asn

```
            180                 185                    190


Asn Pro Ala Glu Asn Ser Pro Asn His Arg Pro Tyr Thr Ala Ser Asp
        195             200                 205


Phe Ile Glu Gly Ile Tyr Arg Thr Glu Arg Asp Lys Gly Thr Leu Tyr
    210             215                 220


Glu Leu Thr Phe Lys Gly Asp His Lys His Glu Phe Lys Arg Leu Ile
225             230             235                 240


Leu Phe Arg Pro Phe Gly Pro Ile Met Lys Val Lys Asn Glu Lys Leu
            245             250                 255


Asn Met Ala Asn Thr Leu Ile Asn Val Ile Val Pro Leu Ala Lys Arg
            260             265                 270


Val Asp Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu Met Cys Ile
        275             280                 285


Glu Gln Asp Gly Arg Val His Leu Thr Val Val Tyr Phe Gly Lys Glu
        290             295                 300


Glu Ile Asn Glu Val Lys Gly Ile Leu Glu Asn Thr Ser Lys Ala Ala
305                 310             315                 320


Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu Asn Gly Glu Phe Ser Arg
            325             330                 335


Gly Lys Gly Leu Asp Val Gly Ala Arg Phe Trp Lys Gly Ser Asn Val
            340             345                 350


Leu Leu Phe Phe Cys Asp Val Asp Ile Tyr Phe Thr Ser Glu Phe Leu
            355             360                 365


Asn Thr Cys Arg Leu Asn Thr Gln Pro Gly Lys Lys Val Phe Tyr Pro
    370             375                 380


Val Leu Phe Ser Gln Tyr Asn Pro Gly Ile Ile Tyr Gly His His Asp
385             390                 395                 400


Ala Val Pro Pro Leu Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly
            405             410                 415


Phe Trp Arg Asp Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp
            420             425                 430
```

844

```
    Phe Ile Asn Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly
            435             440             445


    Glu Asp Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val
        450             455             460


    Val Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg
    465             470             475             480


    Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln Ser
                485             490             495


    Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu Val Phe
                500             505             510


    Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln Lys Thr Ser
            515             520             525


    Ser Lys Lys Thr
        530



    <210>  2496
    <211>  125
    <212>  PRT
    <213>  Homo sapiens

    <400>  2496

    Met Lys Lys Ser Gly Val Leu Phe Leu Leu Gly Ile Ile Leu Leu Val
    1               5               10              15


    Leu Ile Gly Val Gln Gly Thr Pro Val Val Arg Lys Gly Arg Cys Ser
                20              25              30


    Cys Ile Ser Thr Asn Gln Gly Thr Ile His Leu Gln Ser Leu Lys Asp
            35              40              45


    Leu Lys Gln Phe Ala Pro Ser Pro Ser Cys Glu Lys Ile Glu Ile Ile
        50              55              60


    Ala Thr Leu Lys Asn Gly Val Gln Thr Cys Leu Asn Pro Asp Ser Ala
    65              70              75              80


    Asp Val Lys Glu Leu Ile Lys Lys Trp Glu Lys Gln Val Ser Gln Lys
                85              90              95
```

Lys Lys Gln Lys Asn Gly Lys Lys His Gln Lys Lys Lys Val Leu Lys
                100   105   110

Val Arg Lys Ser Gln Arg Ser Arg Gln Lys Lys Thr Thr
        115   120   125

<210> 2497
<211> 98
<212> PRT
<213> Homo sapiens

<400> 2497

Met Asn Gln Thr Ala Ile Leu Ile Cys Cys Leu Ile Phe Leu Thr Leu
1   5   10   15

Ser Gly Ile Gln Gly Val Pro Leu Ser Arg Thr Val Arg Cys Thr Cys
                20   25   30

Ile Ser Ile Ser Asn Gln Pro Val Asn Pro Arg Ser Leu Glu Lys Leu
            35   40   45

Glu Ile Ile Pro Ala Ser Gln Phe Cys Pro Arg Val Glu Ile Ile Ala
    50   55   60

Thr Met Lys Lys Lys Gly Glu Lys Arg Cys Leu Asn Pro Glu Ser Lys
65   70   75   80

Ala Ile Lys Asn Leu Leu Lys Ala Val Ser Lys Glu Met Ser Lys Arg
                85   90   95

Ser Pro

<210> 2498
<211> 155
<212> PRT
<213> Homo sapiens

<400> 2498

Met Thr Pro Gly Lys Thr Ser Leu Val Ser Leu Leu Leu Leu Leu Ser
1   5   10   15

Leu Glu Ala Ile Val Lys Ala Gly Ile Thr Ile Pro Arg Asn Pro Gly
                20   25   30

Cys Pro Asn Ser Glu Asp Lys Asn Phe Pro Arg Thr Val Met Val Asn
            35   40   45

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```
Leu Asn Ile His Asn Arg Asn Thr Asn Thr Asn Pro Lys Arg Ser Ser
    50              55              60


Asp Tyr Tyr Asn Arg Ser Thr Ser Pro Trp Asn Leu His Arg Asn Glu
65              70              75              80


Asp Pro Glu Arg Tyr Pro Ser Val Ile Trp Glu Ala Lys Cys Arg His
    ´           85              90              95


Leu Gly Cys Ile Asn Ala Asp Gly Asn Val Asp Tyr His Met Asn Ser
            100             105             110


Val Pro Ile Gln Gln Glu Ile Leu Val Leu Arg Arg Glu Pro Pro His
        115             120             125


Cys Pro Asn Ser Phe Arg Leu Glu Lys Ile Leu Val Ser Val Gly Cys
    130             135             140


Thr Cys Val Thr Pro Ile Val His His Val Ala
145             150             155
```

```
<210>   2499
<211>   162
<212>   PRT
<213>   Homo sapiens

<400>   2499
```

```
Met Arg Ile Ser Lys Pro His Leu Arg Ser Ile Ser Ile Gln Cys Tyr
1               5               10              15


Leu Cys Leu Leu Leu Asn Ser His Phe Leu Thr Glu Ala Gly Ile His
            20              25              30


Val Phe Ile Leu Gly Cys Phe Ser Ala Gly Leu Pro Lys Thr Glu Ala
        35              40              45


Asn Trp Val Asn Val Ile Ser Asp Leu Lys Lys Ile Glu Asp Leu Ile
    50              55              60


Gln Ser Met His Ile Asp Ala Thr Leu Tyr Thr Glu Ser Asp Val His
65              70              75              80


Pro Ser Cys Lys Val Thr Ala Met Lys Cys Phe Leu Leu Glu Leu Gln
            85              90              95


Val Ile Ser Leu Glu Ser Gly Asp Ala Ser Ile His Asp Thr Val Glu
```

```
               100                105                110
```

Asn Leu Ile Ile Leu Ala Asn Asn Ser Leu Ser Ser Asn Gly Asn Val
        115   120   125

Thr Glu Ser Gly Cys Lys Glu Cys Glu Glu Leu Glu Glu Lys Asn Ile
    130   135   140

Lys Glu Phe Leu Gln Ser Phe Val His Ile Val Gln Met Phe Ile Asn
145   150   155   160

Thr Ser

<210>   2500
<211>   178
<212>   PRT
<213>   Homo sapiens

<400>   2500

Met His Ser Ser Ala Leu Leu Cys Cys Leu Val Leu Leu Thr Gly Val
1   5   10   15

Arg Ala Ser Pro Gly Gln Gly Thr Gln Ser Glu Asn Ser Cys Thr His
            20   25   30

Phe Pro Gly Asn Leu Pro Asn Met Leu Arg Asp Leu Arg Asp Ala Phe
        35   40   45

Ser Arg Val Lys Thr Phe Phe Gln Met Lys Asp Gln Leu Asp Asn Leu
    50   55   60

Leu Leu Lys Glu Ser Leu Leu Glu Asp Phe Lys Gly Tyr Leu Gly Cys
65   70   75   80

Gln Ala Leu Ser Glu Met Ile Gln Phe Tyr Leu Glu Glu Val Met Pro
            85   90   95

Gln Ala Glu Asn Gln Asp Pro Asp Ile Lys Ala His Val Asn Ser Leu
            100   105   110

Gly Glu Asn Leu Lys Thr Leu Arg Leu Arg Leu Arg Arg Cys His Arg
        115   120   125

Phe Leu Pro Cys Glu Asn Lys Ser Lys Ala Val Glu Gln Val Lys Asn
    130   135   140

Ala Phe Asn Lys Leu Gln Glu Lys Gly Ile Tyr Lys Ala Met Ser Glu
145   150   155   160

Phe Asp Ile Phe Ile Asn Tyr Ile Glu Ala Tyr Met Thr Met Lys Ile
                  165   170   175

Arg Asn

<210> 2501
<211> 166
<212> PRT
<213> Homo sapiens

<400> 2501

Met Lys Tyr Thr Ser Tyr Ile Leu Ala Phe Gln Leu Cys Ile Val Leu
1   5   10   15

Gly Ser Leu Gly Cys Tyr Cys Gln Asp Pro Tyr Val Lys Glu Ala Glu
            20   25   30

Asn Leu Lys Lys Tyr Phe Asn Ala Gly His Ser Asp Val Ala Asp Asn
            35   40   45

Gly Thr Leu Phe Leu Gly Ile Leu Lys Asn Trp Lys Glu Glu Ser Asp
        50   55   60

Arg Lys Ile Met Gln Ser Gln Ile Val Ser Phe Tyr Phe Lys Leu Phe
65   70   75   80

Lys Asn Phe Lys Asp Asp Gln Ser Ile Gln Lys Ser Val Glu Thr Ile
                85   90   95

Lys Glu Asp Met Asn Val Lys Phe Phe Asn Ser Asn Lys Lys Lys Arg
            100   105   110

Asp Asp Phe Glu Lys Leu Thr Asn Tyr Ser Val Thr Asp Leu Asn Val
        115   120   125

Gln Arg Lys Ala Ile His Glu Leu Ile Gln Val Met Ala Glu Leu Ser
        130   135   140

Pro Ala Ala Lys Thr Gly Lys Arg Lys Arg Ser Gln Met Leu Phe Gln
145   150   155   160

Gly Arg Arg Ala Ser Gln

165

<210> 2502
<211> 266
<212> PRT
<213> Homo sapiens

<400> 2502

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr
1   5   10   15

Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr
            20   25   30

Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn
        35   40   45

Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu
    50   55   60

Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr
65   70   75   80

Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu
                85   90   95

Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr
            100   105   110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu Pro Lys Val
        115   120   125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu
    130   135   140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp
145   150   155   160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu
                165   170   175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr
            180   185   190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser
        195   200   205

```
Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala
    210             215             220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu
225             230             235             240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His
            245             250             255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser
            260             265
```

```
<210>  2503
<211>  210
<212>  PRT
<213>  Homo sapiens

<400>  2503
```

```
Met Arg Pro Arg Leu Trp Leu Leu Leu Ala Ala Gln Leu Thr Val Leu
1               5               10              15

His Gly Asn Ser Val Leu Gln Gln Thr Pro Ala Tyr Ile Lys Val Gln
            20              25              30

Thr Asn Lys Met Val Met Leu Ser Cys Glu Ala Lys Ile Ser Leu Ser
        35              40              45

Asn Met Arg Ile Tyr Trp Leu Arg Gln Arg Gln Ala Pro Ser Ser Asp
    50              55              60

Ser His His Glu Phe Leu Ala Leu Trp Asp Ser Ala Lys Gly Thr Ile
65              70              75              80

His Gly Glu Glu Val Glu Gln Glu Lys Ile Ala Val Phe Arg Asp Ala
            85              90              95

Ser Arg Phe Ile Leu Asn Leu Thr Ser Val Lys Pro Glu Asp Ser Gly
            100             105             110

Ile Tyr Phe Cys Met Ile Val Gly Ser Pro Glu Leu Thr Phe Gly Lys
            115             120             125

Gly Thr Gln Leu Ser Val Val Asp Phe Leu Pro Thr Thr Ala Gln Pro
    130             135             140

Thr Lys Lys Ser Thr Leu Lys Lys Arg Val Cys Arg Leu Pro Arg Pro
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145   150   155   160

Glu Thr Gln Lys Gly Pro Leu Cys Ser Pro Ile Thr Leu Gly Leu Leu
            165   170   175

Val Ala Gly Val Leu Val Leu Leu Val Ser Leu Gly Val Ala Ile His
            180   185   190

Leu Cys Cys Arg Arg Arg Arg Ala Arg Leu Arg Phe Met Lys Gln Phe
            195   200   205

Tyr Lys
    210

<210>   2504
<211>   458
<212>   PRT
<213>   Homo sapiens

<400>   2504

Met Asn Arg Gly Val Pro Phe Arg His Leu Leu Leu Val Leu Gln Leu
1   5   10   15

Ala Leu Leu Pro Ala Ala Thr Gln Gly Lys Lys Val Val Leu Gly Lys
            20   25   30

Lys Gly Asp Thr Val Glu Leu Thr Cys Thr Ala Ser Gln Lys Lys Ser
            35   40   45

Ile Gln Phe His Trp Lys Asn Ser Asn Gln Ile Lys Ile Leu Gly Asn
    50   55   60

Gln Gly Ser Phe Leu Thr Lys Gly Pro Ser Lys Leu Asn Asp Arg Ala
65   70   75   80

Asp Ser Arg Arg Ser Leu Trp Asp Gln Gly Asn Phe Pro Leu Ile Ile
            85   90   95

Lys Asn Leu Lys Ile Glu Asp Ser Asp Thr Tyr Ile Cys Glu Val Glu
            100   105   110

Asp Gln Lys Glu Glu Val Gln Leu Leu Val Phe Gly Leu Thr Ala Asn
            115   120   125

Ser Asp Thr His Leu Leu Gln Gly Gln Ser Leu Thr Leu Thr Leu Glu
    130   135   140

Ser Pro Pro Gly Ser Ser Pro Ser Val Gln Cys Arg Ser Pro Arg Gly
145   150   155   160

Lys Asn Ile Gln Gly Gly Lys Thr Leu Ser Val Ser Gln Leu Glu Leu
                165   170   175

Gln Asp Ser Gly Thr Trp Thr Cys Thr Val Leu Gln Asn Gln Lys Lys
            180   185   190

Val Glu Phe Lys Ile Asp Ile Val Val Leu Ala Phe Gln Lys Ala Ser
        195   200   205

Ser Ile Val Tyr Lys Lys Glu Gly Glu Gln Val Glu Phe Ser Phe Pro
    210   215   220

Leu Ala Phe Thr Val Glu Lys Leu Thr Gly Ser Gly Glu Leu Trp Trp
225   230   235   240

Gln Ala Glu Arg Ala Ser Ser Ser Lys Ser Trp Ile Thr Phe Asp Leu
                245   250   255

Lys Asn Lys Glu Val Ser Val Lys Arg Val Thr Gln Asp Pro Lys Leu
            260   265   270

Gln Met Gly Lys Lys Leu Pro Leu His Leu Thr Leu Pro Gln Ala Leu
        275   280   285

Pro Gln Tyr Ala Gly Ser Gly Asn Leu Thr Leu Ala Leu Glu Ala Lys
    290   295   300

Thr Gly Lys Leu His Gln Glu Val Asn Leu Val Val Met Arg Ala Thr
305   310   315   320

Gln Leu Gln Lys Asn Leu Thr Cys Glu Val Trp Gly Pro Thr Ser Pro
                325   330   335

Lys Leu Met Leu Ser Leu Lys Leu Glu Asn Lys Glu Ala Lys Val Ser
        340   345   350

Lys Arg Glu Lys Ala Val Trp Val Leu Asn Pro Glu Ala Gly Met Trp
        355   360   365

Gln Cys Leu Leu Ser Asp Ser Gly Gln Val Leu Leu Glu Ser Asn Ile
    370   375   380

853

Lys Val Leu Pro Thr Trp Ser Thr Pro Val Gln Pro Met Ala Leu Ile
385   390   395   400

Val Leu Gly Gly Val Ala Gly Leu Leu Phe Ile Gly Leu Gly Ile
                405   410   415

Phe Phe Cys Val Arg Cys Arg His Arg Arg Gln Ala Glu Arg Met
            420   425   430

Ser Gln Ile Lys Arg Leu Leu Ser Glu Lys Lys Thr Cys Gln Cys Pro
        435   440   445

His Arg Phe Gln Lys Thr Cys Ser Pro Ile
        450   455

<210>   2505
<211>   368
<212>   PRT
<213>   Homo sapiens

<400>   2505

Met Val Leu Glu Val Ser Asp His Gln Val Leu Asn Asp Ala Glu Val
1   5   10   15

Ala Ala Leu Leu Glu Asn Phe Ser Ser Ser Tyr Asp Tyr Gly Glu Asn
            20   25   30

Glu Ser Asp Ser Cys Cys Thr Ser Pro Pro Cys Pro Gln Asp Phe Ser
        35   40   45

Leu Asn Phe Asp Arg Ala Phe Leu Pro Ala Leu Tyr Ser Leu Leu Phe
        50   55   60

Leu Leu Gly Leu Leu Gly Asn Gly Ala Val Ala Ala Val Leu Leu Ser
65   70   75   80

Arg Arg Thr Ala Leu Ser Ser Thr Asp Thr Phe Leu Leu His Leu Ala
            85   90   95

Val Ala Asp Thr Leu Leu Val Leu Thr Leu Pro Leu Trp Ala Val Asp
            100   105   110

Ala Ala Val Gln Trp Val Phe Gly Ser Gly Leu Cys Lys Val Ala Gly
        115   120   125

Ala Leu Phe Asn Ile Asn Phe Tyr Ala Gly Ala Leu Leu Leu Ala Cys
        130   135   140

854

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Ile Ser Phe Asp Arg Tyr Leu Asn Ile Val His Ala Thr Gln Leu Tyr
145               150               155                   160

Arg Arg Gly Pro Pro Ala Arg Val Thr Leu Thr Cys Leu Ala Val Trp
                165               170               175

Gly Leu Cys Leu Leu Phe Ala Leu Pro Asp Phe Ile Phe Leu Ser Ala
            180               185               190

His His Asp Glu Arg Leu Asn Ala Thr His Cys Gln Tyr Asn Phe Pro
            195               200               205

Gln Val Gly Arg Thr Ala Leu Arg Val Leu Gln Leu Val Ala Gly Phe
        210               215               220

Leu Leu Pro Leu Leu Val Met Ala Tyr Cys Tyr Ala His Ile Leu Ala
225               230               235                   240

Val Leu Leu Val Ser Arg Gly Gln Arg Arg Leu Arg Ala Met Arg Leu
                245               250               255

Val Val Val Val Val Val Ala Phe Ala Leu Cys Trp Thr Pro Tyr His
            260               265               270

Leu Val Val Leu Val Asp Ile Leu Met Asp Leu Gly Ala Leu Ala Arg
        275               280               285

Asn Cys Gly Arg Glu Ser Arg Val Asp Val Ala Lys Ser Val Thr Ser
290               295               300

Gly Leu Gly Tyr Met His Cys Cys Leu Asn Pro Leu Leu Tyr Ala Phe
305               310               315                   320

Val Gly Val Lys Phe Arg Glu Arg Met Trp Met Leu Leu Leu Arg Leu
                325               330               335

Gly Cys Pro Asn Gln Arg Gly Leu Gln Arg Gln Pro Ser Ser Ser Arg
            340               345               350

Arg Asp Ser Ser Trp Ser Glu Thr Ser Glu Ala Ser Tyr Ser Gly Leu
        355               360               365
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<210>   2506
<211>   107
<212>   PRT

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<213>  Homo sapiens

<400>  2506

Met Ala Arg Ala Ala Leu Ser Ala Ala Pro Ser Asn Pro Arg Leu Leu
1               5                   10                  15


Arg Val Ala Leu Leu Leu Leu Leu Leu Val Ala Ala Gly Arg Arg Ala
            20                  25                  30


Ala Gly Ala Ser Val Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr
        35                  40                  45


Leu Gln Gly Ile His Pro Lys Asn Ile Gln Ser Val Asn Val Lys Ser
    50                  55                  60


Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn
65                  70                  75                  80


Gly Arg Lys Ala Cys Leu Asn Pro Ala Ser Pro Ile Val Lys Lys Ile
                85                  90                  95


Ile Glu Lys Met Leu Asn Ser Asp Lys Ser Asn
                100                 105


<210>  2507
<211>  558
<212>  PRT
<213>  Homo sapiens

<400>  2507

Met Ala Ala Leu Thr Arg Asp Pro Gln Phe Gln Lys Leu Gln Gln Trp
1               5                   10                  15


Tyr Arg Glu His Arg Ser Glu Leu Asn Leu Arg Arg Leu Phe Asp Ala
            20                  25                  30


Asn Lys Asp Arg Phe Asn His Phe Ser Leu Thr Leu Asn Thr Asn His
        35                  40                  45


Gly His Ile Leu Val Asp Tyr Ser Lys Asn Leu Val Thr Glu Asp Val
    50                  55                  60


Met Arg Met Leu Val Asp Leu Ala Lys Ser Arg Gly Val Glu Ala Ala
65                  70                  75                  80


Arg Glu Arg Met Phe Asn Gly Glu Lys Ile Asn Tyr Thr Glu Gly Arg
                85                  90                  95
```

Ala Val Leu His Val Ala Leu Arg Asn Arg Ser Asn Thr Pro Ile Leu
            100   105   110

Val Asp Gly Lys Asp Val Met Pro Glu Val Asn Lys Val Leu Asp Lys
            115   120   125

Met Lys Ser Phe Cys Gln Arg Val Arg Ser Gly Asp Trp Lys Gly Tyr
    130   135   140

Thr Gly Lys Thr Ile Thr Asp Val Ile Asn Ile Gly Ile Gly Gly Ser
145   150   155   160

Asp Leu Gly Pro Leu Met Val Thr Glu Ala Leu Lys Pro Tyr Ser Ser
                165   170   175

Gly Gly Pro Arg Val Trp Tyr Val Ser Asn Ile Asp Gly Thr His Ile
            180   185   190

Ala Lys Thr Leu Ala Gln Leu Asn Pro Glu Ser Ser Leu Phe Ile Ile
            195   200   205

Ala Ser Lys Thr Phe Thr Thr Gln Glu Thr Ile Thr Asn Ala Glu Thr
    210   215   220

Ala Lys Glu Trp Phe Leu Gln Ala Ala Lys Asp Pro Ser Ala Val Ala
225   230   235   240

Lys His Phe Val Ala Leu Ser Thr Asn Thr Thr Lys Val Lys Glu Phe
            245   250   255

Gly Ile Asp Pro Gln Asn Met Phe Glu Phe Trp Asp Trp Val Gly Gly
            260   265   270

Arg Tyr Ser Leu Trp Ser Ala Ile Gly Leu Ser Ile Ala Leu His Val
    275   280   285

Gly Phe Asp Asn Phe Glu Gln Leu Leu Ser Gly Ala His Trp Met Asp
    290   295   300

Gln His Phe Arg Thr Thr Pro Leu Glu Lys Asn Ala Pro Val Leu Leu
305   310   315   320

Ala Leu Leu Gly Ile Trp Tyr Ile Asn Cys Phe Gly Cys Glu Thr His
            325   330   335

857

Ala Met Leu Pro Tyr Asp Gln Tyr Leu His Arg Phe Ala Ala Tyr Phe
            340   345   350

Gln Gln Gly Asp Met Glu Ser Asn Gly Lys Tyr Ile Thr Lys Ser Gly
            355   360   365

Thr Arg Val Asp His Gln Thr Gly Pro Ile Val Trp Gly Glu Pro Gly
    370   375   380

Thr Asn Gly Gln His Ala Phe Tyr Gln Leu Ile His Gln Gly Thr Lys
385   390   395   400

Met Ile Pro Cys Asp Phe Leu Ile Pro Val Gln Thr Gln His Pro Ile
            405   410   415

Arg Lys Gly Leu His His Lys Ile Leu Leu Ala Asn Phe Leu Ala Gln
            420   425   430

Thr Glu Ala Leu Met Arg Gly Lys Ser Thr Glu Glu Ala Arg Lys Glu
            435   440   445

Leu Gln Ala Ala Gly Lys Ser Pro Glu Asp Leu Glu Arg Leu Leu Pro
    450   455   460

His Lys Val Phe Glu Gly Asn Arg Pro Thr Asn Ser Ile Val Phe Thr
465   470   475   480

Lys Leu Thr Pro Phe Met Leu Gly Ala Leu Val Ala Met Tyr Glu His
            485   490   495

Lys Ile Phe Val Gln Gly Ile Ile Trp Asp Ile Asn Ser Phe Asp Gln
            500   505   510

Trp Gly Val Glu Leu Gly Lys Gln Leu Ala Lys Lys Ile Glu Pro Glu
            515   520   525

Leu Asp Gly Ser Ala Gln Val Thr Ser His Asp Ala Ser Thr Asn Gly
    530   535   540

Leu Ile Asn Phe Ile Lys Gln Gln Arg Glu Ala Arg Val Gln
545   550   555

<210>   2508
<211>   323
<212>   PRT
<213>   Homo sapiens

858

<400> 2508

Met Trp Pro Leu Val Ala Ala Leu Leu Leu Gly Ser Ala Cys Cys Gly
1   5   10   15

Ser Ala Gln Leu Leu Phe Asn Lys Thr Lys Ser Val Glu Phe Thr Phe
            20   25   30

Cys Asn Asp Thr Val Val Ile Pro Cys Phe Val Thr Asn Met Glu Ala
        35   40   45

Gln Asn Thr Thr Glu Val Tyr Val Lys Trp Lys Phe Lys Gly Arg Asp
    50   55   60

Ile Tyr Thr Phe Asp Gly Ala Leu Asn Lys Ser Thr Val Pro Thr Asp
65   70   75   80

Phe Ser Ser Ala Lys Ile Glu Val Ser Gln Leu Leu Lys Gly Asp Ala
                85   90   95

Ser Leu Lys Met Asp Lys Ser Asp Ala Val Ser His Thr Gly Asn Tyr
            100   105   110

Thr Cys Glu Val Thr Glu Leu Thr Arg Glu Gly Glu Thr Ile Ile Glu
        115   120   125

Leu Lys Tyr Arg Val Val Ser Trp Phe Ser Pro Asn Glu Asn Ile Leu
    130   135   140

Ile Val Ile Phe Pro Ile Phe Ala Ile Leu Leu Phe Trp Gly Gln Phe
145   150   155   160

Gly Ile Lys Thr Leu Lys Tyr Arg Ser Gly Gly Met Asp Glu Lys Thr
            165   170   175

Ile Ala Leu Leu Val Ala Gly Leu Val Ile Thr Val Ile Val Ile Val
            180   185   190

Gly Ala Ile Leu Phe Val Pro Gly Glu Tyr Ser Leu Lys Asn Ala Thr
        195   200   205

Gly Leu Gly Leu Ile Val Thr Ser Thr Gly Ile Leu Ile Leu Leu His
    210   215   220

Tyr Tyr Val Phe Ser Thr Ala Ile Gly Leu Thr Ser Phe Val Ile Ala
225   230   235   240

859

Ile Leu Val Ile Gln Val Ile Ala Tyr Ile Leu Ala Val Val Gly Leu
            245   250   255

Ser Leu Cys Ile Ala Ala Cys Ile Pro Met His Gly Pro Leu Leu Ile
            260   265   270

Ser Gly Leu Ser Ile Leu Ala Leu Ala Gln Leu Leu Gly Leu Val Tyr
            275   280   285

Met Lys Phe Val Ala Ser Asn Gln Lys Thr Ile Gln Pro Pro Arg Lys
            290   295   300

Ala Val Glu Glu Pro Leu Asn Ala Phe Lys Glu Ser Lys Gly Met Met
305   310   315   320

Asn Asp Glu

<210>   2509
<211>   362
<212>   PRT
<213>   Homo sapiens

<400>   2509

Met Ala Pro Arg Ser Leu Leu Leu Leu Ser Gly Ala Leu Ala Leu
1   5   10   15

Thr Asp Thr Trp Ala Gly Ser His Ser Leu Arg Tyr Phe Ser Thr Ala
            20   25   30

Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Tyr Ile Ala Val Glu Tyr
            35   40   45

Val Asp Asp Thr Gln Phe Leu Arg Phe Asp Ser Asp Ala Ala Ile Pro
    50   55   60

Arg Met Glu Pro Arg Glu Pro Trp Val Glu Gln Glu Gly Pro Gln Tyr
65   70   75   80

Trp Glu Trp Thr Thr Gly Tyr Ala Lys Ala Asn Ala Gln Thr Asp Arg
            85   90   95

Val Ala Leu Arg Asn Leu Leu Arg Arg Tyr Asn Gln Ser Glu Ala Gly
            100   105   110

860

Ser His Thr Leu Gln Gly Met Asn Gly Cys Asp Met Gly Pro Asp Gly
115   120   125

Arg Leu Leu Arg Gly Tyr His Gln His Ala Tyr Asp Gly Lys Asp Tyr
130   135   140

Ile Ser Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala Asp Thr Val
145   150   155   160

Ala Gln Ile Thr Gln Arg Phe Tyr Glu Ala Glu Glu Tyr Ala Glu Glu
165   170   175

Phe Arg Thr Tyr Leu Glu Gly Glu Cys Leu Glu Leu Leu Arg Arg Tyr
180   185   190

Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Ala Asp Pro Pro Lys Ala
195   200   205

His Val Ala His His Pro Ile Ser Asp His Glu Ala Thr Leu Arg Cys
210   215   220

Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr Trp Gln Arg
225   230   235   240

Asp Gly Glu Glu Gln Thr Gln Asp Thr Glu Leu Val Glu Thr Arg Pro
245   250   255

Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val Val Pro Ser
260   265   270

Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu Gly Leu Pro
275   280   285

Gln Pro Leu Ile Leu Arg Trp Glu Gln Ser Pro Gln Pro Thr Ile Pro
290   295   300

Ile Val Gly Ile Val Ala Gly Leu Val Val Leu Gly Ala Val Val Thr
305   310   315   320

Gly Ala Val Val Ala Ala Val Met Trp Arg Lys Lys Ser Ser Asp Arg
325   330   335

Asn Arg Gly Ser Tyr Ser Gln Ala Ala Val Thr Asp Ser Ala Gln Gly
340   345   350

Ser Gly Val Ser Leu Thr Ala Asn Lys Val

          355   360

<210>   2510
<211>   604
<212>   PRT
<213>   Homo sapiens

<400>   2510

Met Leu Ala Arg Ala Leu Leu Leu Cys Ala Val Leu Ala Leu Ser His
1   5   10   15

Thr Ala Asn Pro Cys Cys Ser His Pro Cys Gln Asn Arg Gly Val Cys
                20   25   30

Met Ser Val Gly Phe Asp Gln Tyr Lys Cys Asp Cys Thr Arg Thr Gly
        35   40   45

Phe Tyr Gly Glu Asn Cys Ser Thr Pro Glu Phe Leu Thr Arg Ile Lys
    50   55   60

Leu Phe Leu Lys Pro Thr Pro Asn Thr Val His Tyr Ile Leu Thr His
65   70   75   80

Phe Lys Gly Phe Trp Asn Val Val Asn Asn Ile Pro Phe Leu Arg Asn
                85   90   95

Ala Ile Met Ser Tyr Val Leu Thr Ser Arg Ser His Leu Ile Asp Ser
                100   105   110

Pro Pro Thr Tyr Asn Ala Asp Tyr Gly Tyr Lys Ser Trp Glu Ala Phe
                115   120   125

Ser Asn Leu Ser Tyr Tyr Thr Arg Ala Leu Pro Pro Val Pro Asp Asp
        130   135   140

Cys Pro Thr Pro Leu Gly Val Lys Gly Lys Lys Gln Leu Pro Asp Ser
145   150   155   160

Asn Glu Ile Val Glu Lys Leu Leu Leu Arg Arg Lys Phe Ile Pro Asp
                165   170   175

Pro Gln Gly Ser Asn Met Met Phe Ala Phe Phe Ala Gln His Phe Thr
                180   185   190

His Gln Phe Phe Lys Thr Asp His Lys Arg Gly Pro Ala Phe Thr Asn
        195   200   205

Gly Leu Gly His Gly Val Asp Leu Asn His Ile Tyr Gly Glu Thr Leu
210   215   220

Ala Arg Gln Arg Lys Leu Arg Leu Phe Lys Asp Gly Lys Met Lys Tyr
225   230   235   240

Gln Ile Ile Asp Gly Glu Met Tyr Pro Pro Thr Val Lys Asp Thr Gln
                245   250   255

Ala Glu Met Ile Tyr Pro Pro Gln Val Pro Glu His Leu Arg Phe Ala
                260   265   270

Val Gly Gln Glu Val Phe Gly Leu Val Pro Gly Leu Met Met Tyr Ala
        275   280   285

Thr Ile Trp Leu Arg Glu His Asn Arg Val Cys Asp Val Leu Lys Gln
    290   295   300

Glu His Pro Glu Trp Gly Asp Glu Gln Leu Phe Gln Thr Ser Arg Leu
305   310   315   320

Ile Leu Ile Gly Glu Thr Ile Lys Ile Val Ile Glu Asp Tyr Val Gln
                325   330   335

His Leu Ser Gly Tyr His Phe Lys Leu Lys Phe Asp Pro Glu Leu Leu
                340   345   350

Phe Asn Lys Gln Phe Gln Tyr Gln Asn Arg Ile Ala Ala Glu Phe Asn
        355   360   365

Thr Leu Tyr His Trp His Pro Leu Leu Pro Asp Thr Phe Gln Ile His
    370   375   380

Asp Gln Lys Tyr Asn Tyr Gln Gln Phe Ile Tyr Asn Asn Ser Ile Leu
385   390   395   400

Leu Glu His Gly Ile Thr Gln Phe Val Glu Ser Phe Thr Arg Gln Ile
                405   410   415

Ala Gly Arg Val Ala Gly Gly Arg Asn Val Pro Pro Ala Val Gln Lys
        420   425   430

Val Ser Gln Ala Ser Ile Asp Gln Ser Arg Gln Met Lys Tyr Gln Ser
        435   440   445

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Phe Asn Glu Tyr Arg Lys Arg Phe Met Leu Lys Pro Tyr Glu Ser Phe
    450             455             460

Glu Glu Leu Thr Gly Glu Lys Glu Met Ser Ala Glu Leu Glu Ala Leu
465             470             475             480

Tyr Gly Asp Ile Asp Ala Val Glu Leu Tyr Pro Ala Leu Leu Val Glu
            485             490             495

Lys Pro Arg Pro Asp Ala Ile Phe Gly Glu Thr Met Val Glu Val Gly
        500             505             510

Ala Pro Phe Ser Leu Lys Gly Leu Met Gly Asn Val Ile Cys Ser Pro
        515             520             525

Ala Tyr Trp Lys Pro Ser Thr Phe Gly Gly Glu Val Gly Phe Gln Ile
    530             535             540

Ile Asn Thr Ala Ser Ile Gln Ser Leu Ile Cys Asn Asn Val Lys Gly
545             550             555             560

Cys Pro Phe Thr Ser Phe Ser Val Pro Asp Pro Glu Leu Ile Lys Thr
            565             570             575

Val Thr Ile Asn Ala Ser Ser Ser Arg Ser Gly Leu Asp Asp Ile Asn
            580             585             590

Pro Thr Val Leu Leu Lys Glu Arg Ser Thr Glu Leu
        595             600
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<210>   2511
<211>   343
<212>   PRT
<213>   Homo sapiens

<400>   2511
```

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Met Pro Leu Cys Ser Leu Leu Thr Cys Leu Gly Leu Asn Val Leu Phe
1               5               10              15

Leu Thr Leu Asn Glu Gly Ala Trp Tyr Ser Val Gly Ala Leu Met Ile
            20              25              30

Ser Val Pro Ala Leu Leu Gly Tyr Leu Gln Glu Val Cys Arg Ala Arg
        35              40              45

Leu Pro Asp Ser Glu Leu Met Arg Arg Lys Tyr His Ser Val Arg Gln
    50              55              60
```

Glu Asp Leu Gln Arg Val Arg Leu Ser Arg Pro Glu Ala Val Ala Glu
65   70   75   80

Val Lys Ser Phe Leu Ile Gln Leu Glu Ala Phe Leu Ser Arg Leu Cys
               85   90   95

Cys Thr Cys Glu Ala Ala Tyr Arg Val Leu His Trp Glu Asn Pro Val
           100   105   110

Val Ser Ser Gln Phe Tyr Gly Ala Leu Leu Gly Thr Val Cys Met Leu
           115   120   125

Tyr Leu Leu Pro Leu Cys Trp Val Leu Thr Leu Leu Asn Ser Thr Leu
    130   135   140

Phe Leu Gly Asn Val Glu Phe Phe Arg Val Val Ser Glu Tyr Arg Ala
145   150   155   160

Ser Leu Gln Gln Arg Met Asn Pro Lys Gln Glu Glu His Ala Phe Glu
               165   170   175

Ser Pro Pro Pro Pro Asp Val Gly Gly Lys Asp Gly Leu Met Asp Ser
           180   185   190

Thr Pro Ala Leu Thr Pro Thr Glu Asp Leu Thr Pro Gly Ser Val Glu
           195   200   205

Glu Ala Glu Glu Ala Glu Pro Asp Glu Glu Phe Lys Asp Ala Ile Glu
    210   215   220

Glu Thr His Leu Val Val Leu Glu Asp Asp Glu Gly Ala Pro Cys Pro
225   230   235   240

Ala Glu Asp Glu Leu Ala Leu Gln Asp Asn Gly Phe Leu Ser Lys Asn
               245   250   255

Glu Val Leu Arg Ser Lys Val Ser Arg Leu Thr Glu Arg Leu Arg Lys
               260   265   270

Arg Tyr Pro Thr Asn Asn Phe Gly Asn Cys Thr Gly Cys Ser Ala Thr
    275   280   285

Phe Ser Val Leu Lys Lys Arg Arg Ser Cys Ser Asn Cys Gly Asn Ser
    290   295   300

865

Phe Cys Ser Arg Cys Cys Ser Phe Lys Val Pro Lys Ser Ser Met Gly
305   310   315   320

Ala Thr Ala Pro Glu Ala Gln Arg Glu Thr Val Phe Val Cys Ala Ser
                325   330   335

Cys Asn Gln Thr Leu Ser Lys
            340

<210> 2512
<211> 789
<212> PRT
<213> Homo sapiens

<400> 2512

Met Lys Met Asp Met Glu Asp Ala Asp Met Thr Leu Trp Thr Glu Ala
1   5   10   15

Glu Phe Glu Glu Lys Cys Thr Tyr Ile Val Asn Asp His Pro Trp Asp
            20   25   30

Ser Gly Ala Asp Gly Gly Thr Ser Val Gln Ala Glu Ala Ser Leu Pro
        35   40   45

Arg Asn Leu Leu Phe Lys Tyr Ala Thr Asn Ser Glu Glu Val Ile Gly
    50   55   60

Val Met Ser Lys Glu Tyr Ile Pro Lys Gly Thr Arg Phe Gly Pro Leu
65   70   75   80

Ile Gly Glu Ile Tyr Thr Asn Asp Thr Val Pro Lys Asn Ala Asn Arg
                85   90   95

Lys Tyr Phe Trp Arg Ile Tyr Ser Arg Gly Glu Leu His His Phe Ile
            100   105   110

Asp Gly Phe Asn Glu Glu Lys Ser Asn Trp Met Arg Tyr Val Asn Pro
            115   120   125

Ala His Ser Pro Arg Glu Gln Asn Leu Ala Ala Cys Gln Asn Gly Met
    130   135   140

Asn Ile Tyr Phe Tyr Thr Ile Lys Pro Ile Pro Ala Asn Gln Glu Leu
145   150   155   160

Leu Val Trp Tyr Cys Arg Asp Phe Ala Glu Arg Leu His Tyr Pro Tyr

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                165                  170                    175

Pro Gly Glu Leu Thr Met Met Asn Leu Thr Gln Thr Gln Ser Ser Leu
            180              185                190

Lys Gln Pro Ser Thr Glu Lys Asn Glu Leu Cys Pro Lys Asn Val Pro
            195              200                205

Lys Arg Glu Tyr Ser Val Lys Glu Ile Leu Lys Leu Asp Ser Asn Pro
            210              215                220

Ser Lys Gly Lys Asp Leu Tyr Arg Ser Asn Ile Ser Pro Leu Thr Ser
225              230              235                240

Glu Lys Asp Leu Asp Asp Phe Arg Arg Arg Gly Ser Pro Glu Met Pro
                245                  250                255

Phe Tyr Pro Arg Val Val Tyr Pro Ile Arg Ala Pro Leu Pro Glu Asp
                260                  265                270

Phe Leu Lys Ala Ser Leu Ala Tyr Gly Ile Glu Arg Pro Thr Tyr Ile
                275                  280                285

Thr Arg Ser Pro Ile Pro Ser Ser Thr Thr Pro Ser Pro Ser Ala Arg
                290                  295                300

Ser Ser Pro Asp Gln Ser Leu Lys Ser Ser Ser Pro His Ser Ser Pro
305              310              315                320

Gly Asn Thr Val Ser Pro Val Gly Pro Gly Ser Gln Glu His Arg Asp
                325                  330                335

Ser Tyr Ala Tyr Leu Asn Ala Ser Tyr Gly Thr Glu Gly Leu Gly Ser
                340                  345                350

Tyr Pro Gly Tyr Ala Pro Leu Pro His Leu Pro Pro Ala Phe Ile Pro
                355                  360                365

Ser Tyr Asn Ala His Tyr Pro Lys Phe Leu Leu Pro Pro Tyr Gly Met
            370              375                380

Asn Cys Asn Gly Leu Ser Ala Val Ser Ser Met Asn Gly Ile Asn Asn
385              390              395                400

Phe Gly Leu Phe Pro Arg Leu Cys Pro Val Tyr Ser Asn Leu Leu Gly
                405                  410                415
```

Gly Gly Ser Leu Pro His Pro Met Leu Asn Pro Thr Ser Leu Pro Ser
            420   425   430

Ser Leu Pro Ser Asp Gly Ala Arg Arg Leu Leu Gln Pro Glu His Pro
        435   440   445

Arg Glu Val Leu Val Pro Ala Pro His Ser Ala Phe Ser Phe Thr Gly
    450   455   460

Ala Ala Ala Ser Met Lys Asp Lys Ala Cys Ser Pro Thr Ser Gly Ser
465   470   475   480

Pro Thr Ala Gly Thr Ala Ala Thr Ala Glu His Val Val Gln Pro Lys
            485   490   495

Ala Thr Ser Ala Ala Met Ala Ala Pro Ser Ser Asp Glu Ala Met Asn
        500   505   510

Leu Ile Lys Asn Lys Arg Asn Met Thr Gly Tyr Lys Thr Leu Pro Tyr
        515   520   525

Pro Leu Lys Lys Gln Asn Gly Lys Ile Lys Tyr Glu Cys Asn Val Cys
    530   535   540

Ala Lys Thr Phe Gly Gln Leu Ser Asn Leu Lys Val His Leu Arg Val
545   550   555   560

His Ser Gly Glu Arg Pro Phe Lys Cys Gln Thr Cys Asn Lys Gly Phe
            565   570   575

Thr Gln Leu Ala His Leu Gln Lys His Tyr Leu Val His Thr Gly Glu
            580   585   590

Lys Pro His Glu Cys Gln Val Cys His Lys Arg Phe Ser Ser Thr Ser
        595   600   605

Asn Leu Lys Thr His Leu Arg Leu His Ser Gly Glu Lys Pro Tyr Gln
    610   615   620

Cys Lys Val Cys Pro Ala Lys Phe Thr Gln Phe Val His Leu Lys Leu
625   630   635   640

His Lys Arg Leu His Thr Arg Glu Arg Pro His Lys Cys Ser Gln Cys
            645   650   655

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        His Lys Asn Tyr Ile His Leu Cys Ser Leu Lys Val His Leu Lys Gly
                    660                 665                 670

        Asn Cys Ala Ala Ala Pro Ala Pro Gly Leu Pro Leu Glu Asp Leu Thr
                    675                 680                 685

        Arg Ile Asn Glu Glu Ile Glu Lys Phe Asp Ile Ser Asp Asn Ala Asp
                    690                 695                 700

        Arg Leu Glu Asp Val Glu Asp Asp Ile Ser Val Ile Ser Val Val Glu
            705                 710                 715                 720

        Lys Glu Ile Leu Ala Val Val Arg Lys Glu Lys Glu Glu Thr Gly Leu
                    725                 730                 735

        Lys Val Ser Leu Gln Arg Asn Met Gly Asn Gly Leu Leu Ser Ser Gly
                    740                 745                 750

        Cys Ser Leu Tyr Glu Ser Ser Asp Leu Pro Leu Met Lys Leu Pro Pro
                    755                 760                 765

        Ser Asn Pro Leu Pro Leu Val Pro Val Lys Val Lys Gln Glu Thr Val
            770                 775                 780

        Glu Pro Met Asp Pro
        785


        <210>  2513
        <211>  381
        <212>  PRT
        <213>  Homo sapiens

        <400>  2513

        Met Pro Phe Ser Asn Ser His Asn Ala Leu Lys Leu Arg Phe Pro Ala
        1               5                   10                  15

        Glu Asp Glu Phe Pro Asp Leu Ser Ala His Asn Asn His Met Ala Lys
                    20                  25                  30

        Val Leu Thr Pro Glu Leu Tyr Ala Glu Leu Arg Ala Lys Ser Thr Pro
                    35                  40                  45

        Ser Gly Phe Thr Leu Asp Asp Val Ile Gln Thr Gly Val Asp Asn Pro
            50                  55                  60

        Gly His Pro Tyr Ile Met Thr Val Gly Cys Val Ala Gly Asp Glu Glu
```

```
 65                        70                      75                      80


Ser Tyr Glu Val Phe Lys Asp Leu Phe Asp Pro Ile Ile Glu Asp Arg
                85                      90                      95


His Gly Gly Tyr Lys Pro Ser Asp Glu His Lys Thr Asp Leu Asn Pro
               100                     105                     110


Asp Asn Leu Gln Gly Gly Asp Asp Leu Asp Pro Asn Tyr Val Leu Ser
               115                     120                     125


Ser Arg Val Arg Thr Gly Arg Ser Ile Arg Gly Phe Cys Leu Pro Pro
       130                     135                     140  ·


His Cys Ser Arg Gly Glu Arg Arg Ala Ile Glu Lys Leu Ala Val Glu
145                     150                     155                     160


Ala Leu Ser Ser Leu Asp Gly Asp Leu Ala Gly Arg Tyr Tyr Ala Leu
                   165                     170                     175


Lys Ser Met Thr Glu Ala Glu Gln Gln Gln Leu Ile Asp Asp His Phe
               180                     185                     190


Leu Phe Asp Lys Pro Val Ser Pro Leu Leu Leu Ala Ser Gly Met Ala
           195                     200                     205


Arg Asp Trp Pro Asp Ala Arg Gly Ile Trp His Asn Asp Asn Lys Thr
       210                     215                     220


Phe Leu Val Trp Val Asn Glu Glu Asp His Leu Arg Val Ile Ser Met
225                     230                     235                     240


Gln Lys Gly Gly Asn Met Lys Glu Val Phe Thr Arg Phe Cys Thr Gly
                   245                     250                     255


Leu Thr Gln Ile Glu Thr Leu Phe Lys Ser Lys Asp Tyr Glu Phe Met
               260                     265                     270


Trp Asn Pro His Leu Gly Tyr Ile Leu Thr Cys Pro Ser Asn Leu Gly
           275                     280                     285


Thr Gly Leu Arg Ala Gly Val His Ile Lys Leu Pro Asn Leu Gly Lys
       290                     295                     300


His Glu Lys Phe Ser Glu Val Leu Lys Arg Leu Arg Leu Gln Lys Arg
305                     310                     315                     320
```

Gly Thr Gly Gly Val Asp Thr Ala Ala Val Gly Gly Val Phe Asp Val
                325   330   335

Ser Asn Ala Asp Arg Leu Gly Phe Ser Glu Val Glu Leu Val Gln Met
                340   345   350

Val Val Asp Gly Val Lys Leu Leu Ile Glu Met Glu Gln Arg Leu Glu
                355   360   365

Gln Gly Gln Ala Ile Asp Asp Leu Met Pro Ala Gln Lys
                370   375   380

<210>   2514
<211>   541
<212>   PRT
<213>   Homo sapiens

<400>   2514

Met Thr Thr Pro Ala Gly Ser Gly Ser Gly Phe Gly Ser Val Ser Trp
1   5   10   15

Trp Gly Leu Ser Pro Ala Leu Asp Leu Gln Ala Glu Ser Pro Pro Val
                20   25   30

Asp Pro Asp Ser Gln Ala Asp Thr Val His Ser Asn Pro Glu Leu Asp
                35   40   45

Val Leu Leu Leu Gly Ser Val Asp Gly Arg His Leu Leu Arg Thr Leu
                50   55   60

Ser Arg Ala Lys Phe Trp Pro Arg Arg Arg Phe Asn Phe Phe Val Leu
65   70   75   80

Glu Asn Asn Leu Glu Ala Val Ala Arg His Met Leu Ile Phe Ser Leu
                85   90   95

Ala Leu Glu Glu Pro Glu Lys Met Gly Leu Gln Glu Arg Ser Glu Thr
                100   105   110

Phe Leu Glu Val Trp Gly Asn Ala Leu Leu Arg Pro Pro Val Ala Ala
                115   120   125

Phe Val Arg Ala Gln Ala Asp Leu Leu Ala His Leu Val Pro Glu Pro
                130   135   140

871

Asp Arg Leu Glu Glu Gln Leu Pro Trp Leu Ser Leu Arg Ala Leu Lys
145   150   155   160

Phe Arg Glu Arg Asp Ala Leu Glu Ala Val Phe Arg Phe Trp Ala Gly
                165   170   175

Gly Glu Lys Gly Pro Gln Ala Phe Pro Met Ser Arg Leu Trp Asp Ser
            180   185   190

Arg Leu Arg His Tyr Leu Gly Ser Arg Tyr Asp Ala Arg Arg Gly Val
        195   200   205

Ser Asp Trp Asp Leu Arg Met Lys Leu His Asp Arg Gly Ala Gln Val
210   215   220

Ile His Pro Gln Glu Phe Arg Arg Trp Arg Asp Thr Gly Val Ala Phe
225   230   235   240

Glu Leu Arg Asp Ser Ser Ala Tyr His Val Pro Asn Arg Thr Leu Ala
            245   250   255

Ser Gly Arg Leu Leu Ser Tyr Arg Gly Glu Arg Val Ala Ala Arg Gly
        260   265   270

Tyr Trp Gly Asp Ile Ala Thr Gly Pro Phe Val Ala Phe Gly Ile Glu
    275   280   285

Ala Asp Asp Glu Ser Leu Leu Arg Thr Ser Asn Gly Gln Pro Val Lys
290   295   300

Thr Ala Gly Glu Ile Thr Gln His Asn Val Thr Glu Leu Leu Arg Asp
305   310   315   320

Val Ala Ala Trp Gly Arg Ala Arg Ala Thr Gly Gly Asp Leu Glu Glu
            325   330   335

Gln Gln His Ala Glu Gly Ser Pro Glu Pro Gly Thr Pro Ala Ala Pro
        340   345   350

Thr Pro Glu Ser Phe Thr Val His Phe Leu Pro Leu Asn Ser Ala Gln
        355   360   365

Thr Leu His His Lys Ser Cys Tyr Asn Gly Arg Phe Gln Leu Leu Tyr
370   375   380

Val Ala Cys Gly Met Val His Leu Leu Ile Pro Glu Leu Gly Ala Cys

385   390   395   400

Val Ala Pro Gly Gly Asn Leu Ile Val Glu Leu Ala Arg Tyr Leu Val
              405   410   415

Asp Val Arg Gln Glu Gln Leu Gln Gly Phe Asn Thr Arg Val Arg Glu
              420   425   430

Leu Ala Gln Ala Ala Gly Phe Ala Pro Gln Thr Gly Ala Arg Pro Ser
              435   440   445

Glu Thr Phe Ala Arg Phe Cys Lys Ser Gln Glu Ser Ala Leu Gly Asn
    450   455   460

Thr Val Pro Ala Val Glu Pro Gly Thr Pro Pro Leu Asp Ile Leu Ala
465   470   475   480

Gln Pro Leu Glu Ala Ser Asn Pro Ala Leu Glu Gly Leu Thr Gln Pro
              485   490   495

Leu Gln Gly Gly Thr Pro His Cys Glu Pro Cys Gln Leu Pro Ser Glu
              500   505   510

Ser Pro Gly Ser Leu Ser Glu Val Leu Ala Gln Pro Gln Gly Ala Leu
              515   520   525

Ala Pro Pro Asn Cys Glu Ser Asp Ser Lys Thr Gly Val
    530   535   540

<210>   2515
<211>   288
<212>   PRT
<213>   Homo sapiens

<400>   2515

Met Ser Asp Ile Glu Glu Val Val Glu Glu Tyr Glu Glu Glu Glu Gln
1   5   10   15

Glu Glu Ala Ala Val Glu Glu Gln Glu Glu Ala Ala Glu Glu Asp Ala
              20   25   30

Glu Ala Glu Ala Glu Thr Glu Glu Thr Arg Ala Glu Glu Asp Glu Glu
              35   40   45

Glu Glu Glu Ala Lys Glu Ala Glu Asp Gly Pro Met Glu Glu Ser Lys
    50   55   60

```
Pro Lys Pro Arg Ser Phe Met Pro Asn Leu Val Pro Pro Lys Ile Pro
65              70          75              80

Asp Gly Glu Arg Val Asp Phe Asp Asp Ile His Arg Lys Arg Met Glu
            85              90              95

Lys Asp Leu Asn Glu Leu Gln Ala Leu Ile Glu Ala His Phe Glu Asn
            100             105             110

Arg Lys Lys Glu Glu Glu Glu Leu Val Ser Leu Lys Asp Arg Ile Glu
        115             120             125

Arg Arg Arg Ala Glu Arg Ala Glu Gln Gln Arg Ile Arg Asn Glu Arg
    130             135             140

Glu Lys Glu Arg Gln Asn Arg Leu Ala Glu Glu Arg Ala Arg Arg Glu
145             150             155             160

Glu Glu Glu Asn Arg Arg Lys Ala Glu Asp Glu Ala Arg Lys Lys Lys
            165             170             175

Ala Leu Ser Asn Met Met His Phe Gly Gly Tyr Ile Gln Lys Gln Ala
        180             185             190

Gln Thr Glu Arg Lys Ser Gly Lys Arg Gln Thr Glu Arg Glu Lys Lys
    195             200             205

Lys Lys Ile Leu Ala Glu Arg Arg Lys Val Leu Ala Ile Asp His Leu
    210             215             220

Asn Glu Asp Gln Leu Arg Glu Lys Ala Lys Glu Leu Trp Gln Ser Ile
225             230             235             240

Tyr Asn Leu Glu Ala Glu Lys Phe Asp Leu Gln Glu Lys Phe Lys Gln
            245             250             255

Gln Lys Tyr Glu Ile Asn Val Leu Arg Asn Arg Ile Asn Asp Asn Gln
            260             265             270

Lys Val Ser Lys Thr Arg Gly Lys Ala Lys Val Thr Gly Arg Trp Lys
        275             280             285


<210>   2516
<211>   154
<212>   PRT
<213>   Homo sapiens
```

874

<400> 2516

```
Met Gly Leu Ser Asp Gly Glu Trp Gln Leu Val Leu Asn Val Trp Gly
1               5                   10                  15

Lys Val Glu Ala Asp Ile Pro Gly His Gly Gln Glu Val Leu Ile Arg
            20                  25                  30

Leu Phe Lys Gly His Pro Glu Thr Leu Glu Lys Phe Asp Lys Phe Lys
        35                  40                  45

His Leu Lys Ser Glu Asp Glu Met Lys Ala Ser Glu Asp Leu Lys Lys
    50                  55                  60

His Gly Ala Thr Val Leu Thr Ala Leu Gly Gly Ile Leu Lys Lys Lys
65                  70                  75                  80

Gly His His Glu Ala Glu Ile Lys Pro Leu Ala Gln Ser His Ala Thr
                85                  90                  95

Lys His Lys Ile Pro Val Lys Tyr Leu Glu Phe Ile Ser Glu Cys Ile
            100                 105                 110

Ile Gln Val Leu Gln Ser Lys His Pro Gly Asp Phe Gly Ala Asp Ala
            115                 120                 125

Gln Gly Ala Met Asn Lys Ala Leu Glu Leu Phe Arg Lys Asp Met Ala
    130                 135                 140

Ser Asn Tyr Lys Glu Leu Gly Phe Gln Gly
145                 150
```

<210>   2517
<211>   501
<212>   PRT
<213>   Homo sapiens

<400>   2517

```
Met Val Arg Lys Pro Val Val Ser Thr Ile Ser Lys Gly Gly Tyr Leu
1               5                   10                  15

Gln Gly Asn Val Asn Gly Arg Leu Pro Ser Leu Gly Asn Lys Glu Pro
            20                  25                  30

Pro Gly Gln Glu Lys Val Gln Leu Lys Arg Lys Val Thr Leu Leu Arg
        35                  40                  45
```

Gly Val Ser Ile Ile Ile Gly Thr Ile Ile Gly Ala Gly Ile Phe Ile
    50   55   60

Ser Pro Lys Gly Val Leu Gln Asn Thr Gly Ser Val Gly Met Ser Leu
65   70   75   80

Thr Ile Trp Thr Val Cys Gly Val Leu Ser Leu Phe Gly Ala Leu Ser
            85   90   95

Tyr Ala Glu Leu Gly Thr Thr Ile Lys Lys Ser Gly Gly His Tyr Thr
            100   105   110

Tyr Ile Leu Glu Val Phe Gly Pro Leu Pro Ala Phe Val Arg Val Trp
        115   120   125

Val Glu Leu Leu Ile Ile Arg Pro Ala Ala Thr Ala Val Ile Ser Leu
    130   135   140

Ala Phe Gly Arg Tyr Ile Leu Glu Pro Phe Phe Ile Gln Cys Glu Ile
145   150   155   160

Pro Glu Leu Ala Ile Lys Leu Ile Thr Ala Val Gly Ile Thr Val Val
                165   170   175

Met Val Leu Asn Ser Met Ser Val Ser Trp Ser Ala Arg Ile Gln Ile
            180   185   190

Phe Leu Thr Phe Cys Lys Leu Thr Ala Ile Leu Ile Ile Ile Val Pro
        195   200   205

Gly Val Met Gln Leu Ile Lys Gly Gln Thr Gln Asn Phe Lys Asp Ala
    210   215   220

Phe Ser Gly Arg Asp Ser Ser Ile Thr Arg Leu Pro Leu Ala Phe Tyr
225   230   235   240

Tyr Gly Met Tyr Ala Tyr Ala Gly Trp Phe Tyr Leu Asn Phe Val Thr
            245   250   255

Glu Glu Val Glu Asn Pro Glu Lys Thr Ile Pro Leu Ala Ile Cys Ile
        260   265   270

Ser Met Ala Ile Val Thr Ile Gly Tyr Val Leu Thr Asn Val Ala Tyr
    275   280   285

Phe Thr Thr Ile Asn Ala Glu Glu Leu Leu Leu Ser Asn Ala Val Ala
    290   295   300

Val Thr Phe Ser Glu Arg Leu Leu Gly Asn Phe Ser Leu Ala Val Pro
305   310   315   320

Ile Phe Val Ala Leu Ser Cys Phe Gly Ser Met Asn Gly Gly Val Phe
                325   330   335

Ala Val Ser Arg Leu Phe Tyr Val Ala Ser Arg Glu Gly His Leu Pro
            340   345   350

Glu Ile Leu Ser Met Ile His Val Arg Lys His Thr Pro Leu Pro Ala
        355   360   365

Val Ile Val Leu His Pro Leu Thr Met Ile Met Leu Phe Ser Gly Asp
    370   375   380

Leu Asp Ser Leu Leu Asn Phe Leu Ser Phe Ala Arg Trp Leu Phe Ile
385   390   395   400

Gly Leu Ala Val Ala Gly Leu Ile Tyr Leu Arg Tyr Lys Cys Pro Asp
            405   410   415

Met His Arg Pro Phe Lys Val Pro Leu Phe Ile Pro Ala Leu Phe Ser
        420   425   430

Phe Thr Cys Leu Phe Met Val Ala Leu Ser Leu Tyr Ser Asp Pro Phe
    435   440   445

Ser Thr Gly Ile Gly Phe Val Ile Thr Leu Thr Gly Val Pro Ala Tyr
    450   455   460

Tyr Leu Phe Ile Ile Trp Asp Lys Lys Pro Arg Trp Phe Arg Ile Met
465   470   475   480

Ser Glu Lys Ile Thr Arg Thr Leu Gln Ile Ile Leu Glu Val Val Pro
            485   490   495

Glu Glu Asp Lys Leu
            500

<210>   2518
<211>   277
<212>   PRT
<213>   Homo sapiens

877

<400>   2518

```
Met Val Arg Leu Pro Leu Gln Cys Val Leu Trp Gly Cys Leu Leu Thr
1               5                   10                  15

Ala Val His Pro Glu Pro Pro Thr Ala Cys Arg Glu Lys Gln Tyr Leu
            20                  25                  30

Ile Asn Ser Gln Cys Cys Ser Leu Cys Gln Pro Gly Gln Lys Leu Val
            35                  40                  45

Ser Asp Cys Thr Glu Phe Thr Glu Thr Glu Cys Leu Pro Cys Gly Glu
        50                  55                  60

Ser Glu Phe Leu Asp Thr Trp Asn Arg Glu Thr His Cys His Gln His
65                  70                  75                  80

Lys Tyr Cys Asp Pro Asn Leu Gly Leu Arg Val Gln Gln Lys Gly Thr
                85                  90                  95

Ser Glu Thr Asp Thr Ile Cys Thr Cys Glu Glu Gly Trp His Cys Thr
            100                 105                 110

Ser Glu Ala Cys Glu Ser Cys Val Leu His Arg Ser Cys Ser Pro Gly
        115                 120                 125

Phe Gly Val Lys Gln Ile Ala Thr Gly Val Ser Asp Thr Ile Cys Glu
130                 135                 140

Pro Cys Pro Val Gly Phe Phe Ser Asn Val Ser Ser Ala Phe Glu Lys
145                 150                 155                 160

Cys His Pro Trp Thr Ser Cys Glu Thr Lys Asp Leu Val Val Gln Gln
                165                 170                 175

Ala Gly Thr Asn Lys Thr Asp Val Val Cys Gly Pro Gln Asp Arg Leu
            180                 185                 190

Arg Ala Leu Val Val Ile Pro Ile Ile Phe Gly Ile Leu Phe Ala Ile
        195                 200                 205

Leu Leu Val Leu Val Phe Ile Lys Lys Val Ala Lys Lys Pro Thr Asn
    210                 215                 220

Lys Ala Pro His Pro Lys Gln Glu Pro Gln Glu Ile Asn Phe Pro Asp
225                 230                 235                 240
```

```
Asp Leu Pro Gly Ser Asn Thr Ala Ala Pro Val Gln Glu Thr Leu His
            245                 250                 255


Gly Cys Gln Pro Val Thr Gln Glu Asp Gly Lys Glu Ser Arg Ile Ser
            260                 265                 270


Val Gln Glu Arg Gln
            275
```

```
<210>  2519
<211>  260
<212>  PRT
<213>  Homo sapiens

<400>  2519
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```
Met Ala Arg Pro His Pro Trp Trp Leu Cys Val Leu Gly Thr Leu Val
1               5                   10                  15


Gly Leu Ser Ala Thr Pro Ala Pro Lys Ser Cys Pro Glu Arg His Tyr
            20                  25                  30


Trp Ala Gln Gly Lys Leu Cys Cys Gln Met Cys Glu Pro Gly Thr Phe
            35                  40                  45


Leu Val Lys Asp Cys Asp Gln His Arg Lys Ala Ala Gln Cys Asp Pro
    50                  55                  60


Cys Ile Pro Gly Val Ser Phe Ser Pro Asp His His Thr Arg Pro His
65                  70                  75                  80


Cys Glu Ser Cys Arg His Cys Asn Ser Gly Leu Leu Val Arg Asn Cys
                85                  90                  95


Thr Ile Thr Ala Asn Ala Glu Cys Ala Cys Arg Asn Gly Trp Gln Cys
            100                 105                 110


Arg Asp Lys Glu Cys Thr Glu Cys Asp Pro Leu Pro Asn Pro Ser Leu
            115                 120                 125


Thr Ala Arg Ser Ser Gln Ala Leu Ser Pro His Pro Gln Pro Thr His
    130                 135                 140


Leu Pro Tyr Val Ser Glu Met Leu Glu Ala Arg Thr Ala Gly His Met
145                 150                 155                 160


Gln Thr Leu Ala Asp Phe Arg Gln Leu Pro Ala Arg Thr Leu Ser Thr
```

                        165   170   175

His Trp Pro Pro Gln Arg Ser Leu Cys Ser Ser Asp Phe Ile Arg Ile
            180   185   190

Leu Val Ile Phe Ser Gly Met Phe Leu Val Phe Thr Leu Ala Gly Ala
            195   200   205

Leu Phe Leu His Gln Arg Arg Lys Tyr Arg Ser Asn Lys Gly Glu Ser
        210   215   220

Pro Val Glu Pro Ala Glu Pro Cys Arg Tyr Ser Cys Pro Arg Glu Glu
225   230   235   240

Glu Gly Ser Thr Ile Pro Ile Gln Glu Asp Tyr Arg Lys Pro Glu Pro
                    245   250   255

Ala Cys Ser Pro
                260

<210>   2520
<211>   329
<212>   PRT
<213>   Homo sapiens

<400>   2520

Met Asp Pro Gln Cys Thr Met Gly Leu Ser Asn Ile Leu Phe Val Met
1   5   10   15

Ala Phe Leu Leu Ser Gly Ala Ala Pro Leu Lys Ile Gln Ala Tyr Phe
            20   25   30

Asn Glu Thr Ala Asp Leu Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln
        35   40   45

Ser Leu Ser Glu Leu Val Val Phe Trp Gln Asp Gln Glu Asn Leu Val
    50   55   60

Leu Asn Glu Val Tyr Leu Gly Lys Glu Lys Phe Asp Ser Val His Ser
65   70   75   80

Lys Tyr Met Gly Arg Thr Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg
                85   90   95

Leu His Asn Leu Gln Ile Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile
            100   105   110

His His Lys Lys Pro Thr Gly Met Ile Arg Ile His Gln Met Asn Ser
        115   120   125

Glu Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu Ile Val Pro Ile
        130   135   140

Ser Asn Ile Thr Glu Asn Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile
145   150   155   160

His Gly Tyr Pro Glu Pro Lys Lys Met Ser Val Leu Leu Arg Thr Lys
                165   170   175

Asn Ser Thr Ile Glu Tyr Asp Gly Ile Met Gln Lys Ser Gln Asp Asn
                180   185   190

Val Thr Glu Leu Tyr Asp Val Ser Ile Ser Leu Ser Val Ser Phe Pro
        195   200   205

Asp Val Thr Ser Asn Met Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys
    210   215   220

Thr Arg Leu Leu Ser Ser Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln
225   230   235   240

Pro Pro Pro Asp His Ile Pro Trp Ile Thr Ala Val Leu Pro Thr Val
                245   250   255

Ile Ile Cys Val Met Val Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys
        260   265   270

Lys Lys Arg Pro Arg Asn Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu
        275   280   285

Arg Glu Glu Ser Glu Gln Thr Lys Lys Arg Glu Lys Ile His Ile Pro
        290   295   300

Glu Arg Ser Asp Glu Ala Gln Arg Val Phe Lys Ser Ser Lys Thr Ser
305   310   315   320

Ser Cys Asp Lys Ser Asp Thr Cys Phe
                325

<210>   2521
<211>   132
<212>   PRT
<213>   Homo sapiens

```
<400>  2521
```

Met Glu Phe Asp Leu Asn Gly Asn Gly Asp Ile Gly Glu Lys Arg Val
1   5   10   15

Ile Cys Gly Gly Arg Val Val Cys Arg Pro Lys Lys Thr Glu Val Ser
            20   25   30

Pro Thr Cys Ser Ile Pro His Asp Leu Gly Gly Gly Pro Pro Thr Thr
            35   40   45

Val Gly Gly Arg Arg Met Gly Met Arg Lys Trp Glu Arg Arg Glu Arg
        50   55   60

Val Ser Pro Pro Ser Pro His Pro His Pro Leu Pro Pro Asp Ile Met
65   70   75   80

Ser Leu Lys Arg Met Leu Glu Lys Leu Gly Val Pro Lys Thr His Leu
                85   90   95

Glu Leu Lys Lys Leu Ile Gly Glu Val Ser Ser Gly Ser Gly Glu Thr
            100   105   110

Phe Ser Tyr Pro Asp Phe Leu Arg Met Met Leu Gly Lys Arg Ser Ala
            115   120   125

Ile Leu Lys Met
        130

```
<210>  2522
<211>  491
<212>  PRT
<213>  Homo sapiens

<400>  2522
```

Met Glu Ser Ser Ala Lys Arg Lys Met Asp Pro Asp Asn Pro Asp Glu
1   5   10   15

Gly Pro Ser Ser Lys Val Pro Arg Pro Glu Thr Pro Val Thr Lys Ala
            20   25   30

Thr Thr Phe Leu Gln Thr Met Leu Arg Lys Glu Val Asn Ser Gln Leu
            35   40   45

Ser Leu Gly Asp Pro Leu Phe Pro Glu Leu Ala Glu Glu Ser Leu Lys
    50   55   60

```
Thr Phe Glu Gln Val Thr Glu Asp Cys Asn Glu Asn Pro Glu Lys Asp
65                  70              75                  80


Val Leu Ala Glu Leu Val Lys Gln Ile Lys Val Arg Val Asp Met Val
                85                  90                  95


Arg His Arg Ile Lys Glu His Met Leu Lys Lys Tyr Thr Gln Thr Glu
                100                 105                 110


Glu Lys Phe Thr Gly Ala Phe Asn Met Met Gly Gly Cys Leu Gln Asn
            115                 120                 125


Ala Leu Asp Ile Leu Asp Lys Val His Glu Pro Phe Glu Glu Met Lys
        130                 135                 140
            -


Cys Ile Gly Leu Thr Met Gln Ser Met Tyr Glu Asn Tyr Ile Val Pro
145                 150                 155                 160


Glu Asp Lys Arg Glu Met Trp Met Ala Cys Ile Lys Glu Leu His Asp
                165                 170                 175


Val Ser Lys Gly Ala Ala Asn Lys Leu Gly Gly Ala Leu Gln Ala Lys
                180                 185                 190


Ala Arg Ala Lys Lys Asp Glu Leu Arg Arg Lys Met Met Tyr Met Cys
        195                 200                 205


Tyr Arg Asn Ile Glu Phe Phe Thr Lys Asn Ser Ala Phe Pro Lys Thr
        210                 215                 220


Thr Asn Gly Cys Ser Gln Ala Met Ala Ala Leu Gln Asn Leu Pro Gln
225                 230                 235                 240


Cys Ser Pro Asp Glu Ile Met Ala Tyr Ala Gln Lys Ile Phe Lys Ile
            245                 250                 255


Leu Asp Glu Glu Arg Asp Lys Val Leu Thr His Ile Asp His Ile Phe
            260                 265                 270


Met Asp Ile Leu Thr Thr Cys Val Glu Thr Met Cys Asn Glu Tyr Lys
            275                 280                 285


Val Thr Ser Asp Ala Cys Met Met Thr Met Tyr Gly Gly Ile Ser Leu
        290                 295                 300
```

883

Leu Ser Glu Phe Cys Arg Val Leu Cys Cys Tyr Val Leu Glu Glu Thr
305   310   315   320

Ser Val Met Leu Ala Lys Arg Pro Leu Ile Thr Lys Pro Glu Val Ile
                325   330   335

Ser Val Met Lys Arg Arg Ile Glu Glu Ile Cys Met Lys Val Phe Ala
            340   345   350

Gln Tyr Ile Leu Gly Ala Asp Pro Leu Arg Val Cys Ser Pro Ser Val
        355   360   365

Asp Asp Leu Arg Ala Ile Ala Glu Glu Ser Asp Glu Glu Glu Ala Ile
    370   375   380

Val Ala Tyr Thr Leu Ala Thr Ala Gly Val Ser Ser Ser Asp Ser Leu
385   390   395   400

Val Ser Pro Pro Glu Ser Pro Val Pro Ala Thr Ile Pro Leu Ser Ser
            405   410   415

Val Ile Val Ala Glu Asn Ser Asp Gln Glu Glu Ser Glu Gln Ser Asp
        420   425   430

Glu Glu Glu Glu Glu Gly Ala Gln Glu Glu Arg Glu Asp Thr Val Ser
    435   440   445

Val Lys Ser Glu Pro Val Ser Glu Ile Glu Glu Val Ala Pro Glu Glu
    450   455   460

Glu Glu Asp Gly Ala Glu Glu Pro Thr Ala Ser Gly Gly Lys Ser Thr
465   470   475   480

His Pro Met Val Thr Arg Ser Lys Ala Asp Gln
            485   490

<210>   2523
<211>   491
<212>   PRT
<213>   Homo sapiens

<400>   2523

Met Glu Ser Ser Ala Lys Arg Lys Met Asp Pro Asp Asn Pro Asp Glu
1   5   10   15

Gly Pro Ser Ser Lys Val Pro Arg Pro Glu Thr Pro Val Thr Lys Ala
        20   25   30

```
Thr Thr Phe Leu Gln Thr Met Leu Arg Lys Glu Val Asn Ser Gln Leu
        35              40              45


Ser Leu Gly Asp Pro Leu Phe Pro Glu Leu Ala Glu Glu Ser Leu Lys
        50              55              60


Thr Phe Glu Gln Val Thr Glu Asp Cys Asn Glu Asn Pro Glu Lys Asp
65              70              75              80


Val Leu Ala Glu Leu Val Lys Gln Ile Lys Val Arg Val Asp Met Val
                85              90              95


Arg His Arg Ile Lys Glu His Met Leu Lys Lys Tyr Thr Gln Thr Glu
                100             105             110


Glu Lys Phe Thr Gly Ala Phe Asn Met Met Gly Gly Cys Leu Gln Asn
        115             120             125


Ala Leu Asp Ile Leu Asp Lys Val His Glu Pro Phe Glu Glu Met Lys
    130             135             140


Cys Ile Gly Leu Thr Met Gln Ser Met Tyr Glu Asn Tyr Ile Val Pro
145             150             155             160


Glu Asp Lys Arg Glu Met Trp Met Ala Cys Ile Lys Glu Leu His Asp
                165             170             175


Val Ser Lys Gly Ala Ala Asn Lys Leu Gly Gly Ala Leu Gln Ala Lys
                180             185             190


Ala Arg Ala Lys Lys Asp Glu Leu Arg Arg Lys Met Met Tyr Met Cys
        195             200             205


Tyr Arg Asn Ile Glu Phe Phe Thr Lys Asn Ser Ala Phe Pro Lys Thr
210             215             220


Thr Asn Gly Cys Ser Gln Ala Met Ala Ala Leu Gln Asn Leu Pro Gln
225             230             235             240


Cys Ser Pro Asp Glu Ile Met Ala Tyr Ala Gln Lys Ile Phe Lys Ile
                245             250             255


Leu Asp Glu Glu Arg Asp Lys Val Leu Thr His Ile Asp His Ile Phe
        260             265             270
```

Met Asp Ile Leu Thr Thr Cys Val Glu Thr Met Cys Asn Glu Tyr Lys
        275   280   285

Val Thr Ser Asp Ala Cys Met Met Thr Met Tyr Gly Gly Ile Ser Leu
        290   295   300

Leu Ser Glu Phe Cys Arg Val Leu Cys Cys Tyr Val Leu Glu Glu Thr
305   310   315   320

Ser Val Met Leu Ala Lys Arg Pro Leu Ile Thr Lys Pro Glu Val Ile
                325   330   335

Ser Val Met Lys Arg Arg Ile Glu Glu Ile Cys Met Lys Val Phe Ala
                340   345   350

Gln Tyr Ile Leu Gly Ala Asp Pro Leu Arg Val Cys Ser Pro Ser Val
                355   360   365

Asp Asp Leu Arg Ala Ile Ala Glu Glu Ser Asp Glu Glu Glu Ala Ile
        370   375   380

Val Ala Tyr Thr Leu Ala Thr Ala Gly Val Ser Ser Ser Asp Ser Leu
385   390   395   400

Val Ser Pro Pro Glu Ser Pro Val Pro Ala Thr Ile Pro Leu Ser Ser
                405   410   415

Val Ile Val Ala Glu Asn Ser Asp Gln Glu Glu Ser Glu Gln Ser Asp
        420   425   430

Glu Glu Glu Glu Glu Gly Ala Gln Glu Glu Arg Glu Asp Thr Val Ser
        435   440   445

Val Lys Ser Glu Pro Val Ser Glu Ile Glu Glu Val Ala Pro Glu Glu
        450   455   460

Glu Glu Asp Gly Ala Glu Glu Pro Thr Ala Ser Gly Gly Lys Ser Thr
465   470   475   480

His Pro Met Val Thr Arg Ser Lys Ala Asp Gln
        485   490

<210>   2524
<211>   641
<212>   PRT
<213>   Homo sapiens

<400> 2524

Met Ser Asp Glu Gly Pro Gly Thr Gly Pro Gly Asn Gly Leu Gly Glu
1   5   10   15

Lys Gly Asp Thr Ser Gly Pro Glu Gly Ser Gly Gly Ser Gly Pro Gln
            20   25   30

Arg Arg Gly Gly Asp Asn His Gly Arg Gly Arg Gly Arg Gly Arg Gly
            35   40   45

Arg Gly Gly Gly Arg Pro Gly Ala Pro Gly Gly Ser Gly Ser Gly Pro
    50   55   60

Arg His Arg Asp Gly Val Arg Arg Pro Gln Lys Arg Pro Ser Cys Ile
65   70   75   80

Gly Cys Lys Gly Thr His Gly Gly Thr Gly Ala Gly Ala Gly Ala Gly
                85   90   95

Gly Ala Gly Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly Ala Gly
            100   105   110

Gly Gly Ala Gly Gly Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly
        115   120   125

Gly Ala Gly Ala Gly Gly Gly Ala Gly Gly Ala Gly Gly Ala Gly Ala
    130   135   140

Gly Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly Gly Ala Gly Ala Gly
145   150   155   160

Gly Gly Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly
            165   170   175

Ala Gly Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly Gly
        180   185   190

Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly Ala Gly Gly Ala Gly
    195   200   205

Gly Ala Gly Gly Ala Gly Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala`
    210   215   220

Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly Ala Gly Ala Gly Gly Ala
225   230   235   240

887

Gly Ala Gly Gly Ala Gly Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly
                245   250   255

Gly Ala Gly Gly Ala Gly Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly
                260   265   270

Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly Gly Ala Gly
            275   280   285

Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly Ala Gly Gly Ala Gly
    290   295   300

Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly Gly Gly Ala Gly Ala Gly
305   310   315   320

Gly Ala Gly Ala Gly Gly Gly Gly Arg Gly Arg Gly Gly Ser Gly Gly
            325   330   335

Arg Gly Arg Gly Gly Ser Gly Gly Arg Gly Arg Gly Gly Ser Gly Gly
            340   345   350

Arg Arg Gly Arg Gly Arg Glu Arg Ala Arg Gly Gly Ser Arg Glu Arg
    355   360   365

Ala Arg Gly Arg Gly Arg Gly Arg Gly Glu Lys Arg Pro Arg Ser Pro
370   375   380

Ser Ser Gln Ser Ser Ser Ser Gly Ser Pro Pro Arg Arg Pro Pro Pro
385   390   395   400

Gly Arg Arg Pro Phe Phe His Pro Val Gly Glu Ala Asp Tyr Phe Glu
            405   410   415

Tyr His Gln Glu Gly Gly Pro Asp Gly Glu Pro Asp Val Pro Pro Gly
            420   425   430

Ala Ile Glu Gln Gly Pro Ala Asp Asp Pro Gly Glu Gly Pro Ser Thr
            435   440   445

Gly Pro Arg Gly Gln Gly Asp Gly Gly Arg Arg Lys Lys Gly Gly Trp
    450   455   460

Phe Gly Lys His Arg Gly Gln Gly Gly Ser Asn Pro Lys Phe Glu Asn
465   470   475   480

```
    Ile Ala Glu Gly Leu Arg Ala Leu Leu Ala Arg Ser His Val Glu Arg
                  485                 490                 495

    Thr Thr Asp Glu Gly Thr Trp Val Ala Gly Val Phe Val Tyr Gly Gly
                  500                 505                 510

    Ser Lys Thr Ser Leu Tyr Asn Leu Arg Arg Gly Thr Ala Leu Ala Ile
                  515                 520                 525

    Pro Gln Cys Arg Leu Thr Pro Leu Ser Arg Leu Pro Phe Gly Met Ala
              530                 535                 540

    Pro Gly Pro Gly Pro Gln Pro Gly Pro Leu Arg Glu Ser Ile Val Cys
    545                 550                 555                 560

    Tyr Phe Met Val Phe Leu Gln Thr His Ile Phe Ala Glu Val Leu Lys
                  565                 570                 575

    Asp Ala Ile Lys Asp Leu Val Met Thr Lys Pro Ala Pro Thr Cys Asn
                  580                 585                 590

    Ile Arg Val Thr Val Cys Ser Phe Asp Asp Gly Val Asp Leu Pro Pro
              595                 600                 605

    Trp Phe Pro Pro Met Val Glu Gly Ala Ala Ala Glu Gly Asp Asp Gly
    610                 615                 620

    Asp Asp Gly Asp Glu Gly Gly Asp Gly Asp Glu Gly Glu Glu Gly Gln
    625                 630                 635                 640

    Glu
```

```
<210>  2525
<211>  245
<212>  PRT
<213>  Homo sapiens

<400>  2525

Met Met Asp Pro Asn Ser Thr Ser Glu Asp Val Lys Phe Thr Pro Asp
1               5                   10                  15

Pro Tyr Gln Val Pro Phe Val Gln Ala Phe Asp Gln Ala Thr Arg Val
              20                  25                  30

Tyr Gln Asp Leu Gly Gly Pro Ser Gln Ala Pro Leu Pro Cys Val Leu
```

```
                    35                      40                      45


        Trp Pro Val Leu Pro Glu Pro Leu Pro Gln Gly Gln Leu Thr Ala Tyr
            50                  55                  60


        His Val Ser Thr Ala Pro Thr Gly Ser Trp Phe Ser Ala Pro Gln Pro
        65                  70                  75                  80


        Ala Pro Glu Asn Ala Tyr Gln Ala Tyr Ala Ala Pro Gln Leu Phe Pro
                        85                  90                  95


        Val Ser Asp Ile Thr Gln Asn Gln Gln Thr Asn Gln Ala Gly Gly Glu
                        100                 105                 110


        Ala Pro Gln Pro Gly Asp Asn Ser Thr Val Gln Thr Ala Ala Ala Val
                    115                 120                 125


        Val Phe Ala Cys Pro Gly Ala Asn Gln Gly Gln Gln Leu Ala Asp Ile
            130                 135                 140


        Gly Val Pro Gln Pro Ala Pro Val Ala Ala Pro Ala Arg Arg Thr Arg
        145                 150                 155                 160


        Lys Pro Gln Gln Pro Glu Ser Leu Glu Glu Cys Asp Ser Glu Leu Glu
                        165                 170                 175


        Ile Lys Arg Tyr Lys Asn Arg Val Ala Ser Arg Lys Cys Arg Ala Lys
                        180                 185                 190


        Phe Lys Gln Leu Leu Gln His Tyr Arg Glu Val Ala Ala Ala Lys Ser
                    195                 200                 205


        Ser Glu Asn Asp Arg Leu Arg Leu Leu Leu Lys Gln Met Cys Pro Ser
            210                 215                 220


        Leu Asp Val Asp Ser Ile Ile Pro Arg Thr Pro Asp Val Leu His Glu
        225                 230                 235                 240


        Asp Leu Leu Asn Phe
                        245



        <210>   2526
        <211>   491
        <212>   PRT
        <213>   Homo sapiens

        <400>   2526
```

```
Met Glu Ser Ser Ala Lys Arg Lys Met Asp Pro Asp Asn Pro Asp Glu
1             5             10            15

Gly Pro Ser Ser Lys Val Pro Arg Pro Glu Thr Pro Val Thr Lys Ala
          20            25            30

Thr Thr Phe Leu Gln Thr Met Leu Arg Lys Glu Val Asn Ser Gln Leu
          35            40            45

Ser Leu Gly Asp Pro Leu Phe Pro Glu Leu Ala Glu Glu Ser Leu Lys
    50            55            60

Thr Phe Glu Gln Val Thr Glu Asp Cys Asn Glu Asn Pro Glu Lys Asp
65            70            75            80

Val Leu Ala Glu Leu Val Lys Gln Ile Lys Val Arg Val Asp Met Val
          85            90            95

Arg His Arg Ile Lys Glu His Met Leu Lys Lys Tyr Thr Gln Thr Glu
          100           105           110

Glu Lys Phe Thr Gly Ala Phe Asn Met Met Gly Gly Cys Leu Gln Asn
          115           120           125

Ala Leu Asp Ile Leu Asp Lys Val His Glu Pro Phe Glu Glu Met Lys
    130           135           140

Cys Ile Gly Leu Thr Met Gln Ser Met Tyr Glu Asn Tyr Ile Val Pro
145           150           155           160

Glu Asp Lys Arg Glu Met Trp Met Ala Cys Ile Lys Glu Leu His Asp
          165           170           175

Val Ser Lys Gly Ala Ala Asn Lys Leu Gly Gly Ala Leu Gln Ala Lys
          180           185           190

Ala Arg Ala Lys Lys Asp Glu Leu Arg Arg Lys Met Met Tyr Met Cys
          195           200           205

Tyr Arg Asn Ile Glu Phe Phe Thr Lys Asn Ser Ala Phe Pro Lys Thr
    210           215           220

Thr Asn Gly Cys Ser Gln Ala Met Ala Ala Leu Gln Asn Leu Pro Gln
225           230           235           240
```

891

Cys Ser Pro Asp Glu Ile Met Ala Tyr Ala Gln Lys Ile Phe Lys Ile
                245   250   255

Leu Asp Glu Glu Arg Asp Lys Val Leu Thr His Ile Asp His Ile Phe
            260   265   270

Met Asp Ile Leu Thr Thr Cys Val Glu Thr Met Cys Asn Glu Tyr Lys
            275   280   285

Val Thr Ser Asp Ala Cys Met Met Thr Met Tyr Gly Gly Ile Ser Leu
            290   295   300

Leu Ser Glu Phe Cys Arg Val Leu Cys Cys Tyr Val Leu Glu Glu Thr
305   310   315   320

Ser Val Met Leu Ala Lys Arg Pro Leu Ile Thr Lys Pro Glu Val Ile
            325   330   335

Ser Val Met Lys Arg Arg Ile Glu Glu Ile Cys Met Lys Val Phe Ala
            340   345   350

Gln Tyr Ile Leu Gly Ala Asp Pro Leu Arg Val Cys Ser Pro Ser Val
            355   360   365

Asp Asp Leu Arg Ala Ile Ala Glu Glu Ser Asp Glu Glu Glu Ala Ile
            370   375   380

Val Ala Tyr Thr Leu Ala Thr Ala Gly Val Ser Ser Ser Asp Ser Leu
385   390   395   400

Val Ser Pro Pro Glu Ser Pro Val Pro Ala Thr Ile Pro Leu Ser Ser
            405   410   415

Val Ile Val Ala Glu Asn Ser Asp Gln Glu Glu Ser Glu Gln Ser Asp
            420   425   430

Glu Glu Glu Glu Glu Gly Ala Gln Glu Glu Arg Glu Asp Thr Val Ser
            435   440   445

Val Lys Ser Glu Pro Val Ser Glu Ile Glu Glu Val Ala Pro Glu Glu
            450   455   460

Glu Glu Asp Gly Ala Glu Glu Pro Thr Ala Ser Gly Gly Lys Ser Thr
465   470   475   480

His Pro Met Val Thr Arg Ser Lys Ala Asp Gln

                        485   490

```
<210>  2527
<211>  491
<212>  PRT
<213>  Homo sapiens

<400>  2527

Met Glu Ser Ser Ala Lys Arg Lys Met Asp Pro Asp Asn Pro Asp Glu
1               5                   10                  15


Gly Pro Ser Ser Lys Val Pro Arg Pro Glu Thr Pro Val Thr Lys Ala
                20                  25                  30


Thr Thr Phe Leu Gln Thr Met Leu Arg Lys Glu Val Asn Ser Gln Leu
        35                  40                  45


Ser Leu Gly Asp Pro Leu Phe Pro Glu Leu Ala Glu Glu Ser Leu Lys
        50                  55                  60


Thr Phe Glu Gln Val Thr Glu Asp Cys Asn Glu Asn Pro Glu Lys Asp
65                  70                  75                  80


Val Leu Ala Glu Leu Val Lys Gln Ile Lys Val Arg Val Asp Met Val
                85                  90                  95


Arg His Arg Ile Lys Glu His Met Leu Lys Lys Tyr Thr Gln Thr Glu
                100                 105                 110


Glu Lys Phe Thr Gly Ala Phe Asn Met Met Gly Gly Cys Leu Gln Asn
        115                 120                 125


Ala Leu Asp Ile Leu Asp Lys Val His Glu Pro Phe Glu Glu Met Lys
        130                 135                 140


Cys Ile Gly Leu Thr Met Gln Ser Met Tyr Glu Asn Tyr Ile Val Pro
145                 150                 155                 160


Glu Asp Lys Arg Glu Met Trp Met Ala Cys Ile Lys Glu Leu His Asp
                165                 170                 175


Val Ser Lys Gly Ala Ala Asn Lys Leu Gly Gly Ala Leu Gln Ala Lys
                180                 185                 190


Ala Arg Ala Lys Lys Asp Glu Leu Arg Arg Lys Met Met Tyr Met Cys
        195                 200                 205
```

                                    893

Tyr Arg Asn Ile Glu Phe Phe Thr Lys Asn Ser Ala Phe Pro Lys Thr
    210   215   220

Thr Asn Gly Cys Ser Gln Ala Met Ala Ala Leu Gln Asn Leu Pro Gln
225   230   235   240

Cys Ser Pro Asp Glu Ile Met Ala Tyr Ala Gln Lys Ile Phe Lys Ile
            245   250   255

Leu Asp Glu Glu Arg Asp Lys Val Leu Thr His Ile Asp His Ile Phe
            260   265   270

Met Asp Ile Leu Thr Thr Cys Val Glu Thr Met Cys Asn Glu Tyr Lys
        275   280   285

Val Thr Ser Asp Ala Cys Met Met Thr Met Tyr Gly Gly Ile Ser Leu
    290   295   300

Leu Ser Glu Phe Cys Arg Val Leu Cys Cys Tyr Val Leu Glu Glu Thr
305   310   315   320

Ser Val Met Leu Ala Lys Arg Pro Leu Ile Thr Lys Pro Glu Val Ile
            325   330   335

Ser Val Met Lys Arg Arg Ile Glu Glu Ile Cys Met Lys Val Phe Ala
        340   345   350

Gln Tyr Ile Leu Gly Ala Asp Pro Leu Arg Val Cys Ser Pro Ser Val
        355   360   365

Asp Asp Leu Arg Ala Ile Ala Glu Glu Ser Asp Glu Glu Glu Ala Ile
    370   375   380

Val Ala Tyr Thr Leu Ala Thr Ala Gly Val Ser Ser Ser Asp Ser Leu
385   390   395   400

Val Ser Pro Pro Glu Ser Pro Val Pro Ala Thr Ile Pro Leu Ser Ser
            405   410   415

Val Ile Val Ala Glu Asn Ser Asp Gln Glu Glu Ser Glu Gln Ser Asp
            420   425   430

Glu Glu Glu Glu Glu Gly Ala Gln Glu Glu Arg Glu Asp Thr Val Ser
    435   440   445

894

```
Val Lys Ser Glu Pro Val Ser Glu Ile Glu Glu Val Ala Pro Glu Glu
    450             455             460
```

```
Glu Glu Asp Gly Ala Glu Glu Pro Thr Ala Ser Gly Gly Lys Ser Thr
465             470             475             480
```

```
His Pro Met Val Thr Arg Ser Lys Ala Asp Gln
            485             490
```

```
<210>  2528
<211>  142
<212>  PRT
<213>  Homo sapiens
```

```
<400>  2528
```

```
Met Ser Leu Leu Pro Val Pro Tyr Thr Glu Ala Ala Ser Leu Ser Thr
1               5               10              15
```

```
Gly Ser Thr Val Thr Ile Lys Gly Arg Pro Leu Ala Cys Phe Leu Asn
            20              25              30
```

```
Glu Pro Tyr Leu Gln Val Asp Phe His Thr Glu Met Lys Glu Glu Ser
            35              40              45
```

```
Asp Ile Val Phe His Phe Gln Val Cys Phe Gly Arg Arg Val Val Met
    50              55              60
```

```
Asn Ser Arg Glu Tyr Gly Ala Trp Lys Gln Gln Val Glu Ser Lys Asn
65              70              75              80
```

```
Met Pro Phe Gln Asp Gly Gln Glu Phe Glu Leu Ser Ile Ser Val Leu
            85              90              95
```

```
Pro Asp Lys Tyr Gln Val Met Val Asn Gly Gln Ser Ser Tyr Thr Phe
            100             105             110
```

```
Asp His Arg Ile Lys Pro Glu Ala Val Lys Met Val Gln Val Trp Arg
            115             120             125
```

```
Asp Ile Ser Leu Thr Lys Phe Asn Val Ser Tyr Leu Lys Arg
    130             135             140
```

```
<210>  2529
<211>  298
<212>  PRT
<213>  Homo sapiens
```

```
<400>  2529
```

```
Met Ala Glu Ala Met Asp Leu Gly Lys Asp Pro Asn Gly Pro Thr His
1               5               10              15


Ser Ser Thr Leu Phe Val Arg Asp Asp Gly Ser Ser Met Ser Phe Tyr
            20              25              30


Val Arg Pro Ser Pro Ala Lys Arg Arg Leu Ser Thr Leu Ile Leu His
        35              40              45


Gly Gly Gly Thr Val Cys Arg Val Gln Glu Pro Gly Ala Val Leu Leu
    50              55              60


Ala Gln Pro Gly Glu Ala Leu Ala Glu Ala Ser Gly Asp Phe Ile Ser
65              70              75              80


Thr Gln His Ile Leu Asp Cys Val Glu Arg Asn Glu Arg Leu Glu Leu
            85              90              95


Glu Ala Tyr Arg Leu Gly Pro Ala Ser Ala Ala Asp Thr Gly Ser Glu
        100             105             110


Ala Lys Pro Gly Ala Leu Ala Glu Gly Ala Ala Glu Pro Glu Pro Gln
        115             120             125


Arg His Ala Gly Arg Ile Ala Phe Thr Asp Ala Asp Asp Val Ala Ile
    130             135             140


Leu Thr Tyr Val Lys Glu Asn Ala Arg Ser Pro Ser Ser Val Thr Gly
145             150             155             160


Asn Ala Leu Trp Lys Ala Met Glu Lys Ser Ser Leu Thr Gln His Ser
            165             170             175


Trp Gln Ser Leu Lys Asp Arg Tyr Leu Lys His Leu Arg Gly Gln Glu
        180             185             190


His Lys Tyr Leu Leu Gly Asp Ala Pro Val Ser Pro Ser Ser Gln Lys
        195             200             205


Leu Lys Arg Lys Ala Glu Glu Asp Pro Glu Ala Ala Asp Ser Gly Glu
    210             215             220


Pro Gln Asn Lys Arg Thr Pro Asp Leu Pro Glu Glu Glu Tyr Val Lys
225             230             235             240
```

```
    Glu Glu Ile Gln Glu Asn Glu Glu Ala Val Lys Lys Met Leu Val Glu
                    245                 250                 255


    Ala Thr Arg Glu Phe Glu Glu Val Val Val Asp Glu Ser Pro Pro Asp
                260                 265                 270


    Phe Glu Ile His Ile Thr Met Cys Asp Asp Asp Pro Pro Thr Pro Glu
                275                 280                 285


    Glu Asp Ser Glu Thr Gln Pro Asp Glu Glu
        290                 295
```

```
<210>  2530
<211>  365
<212>  PRT
<213>  Homo sapiens

<400>  2530
```

```
    Met Ala Val Met Ala Pro Arg Thr Leu Leu Leu Leu Ser Gly Ala
    1               5                   10                  15


    Leu Ala Leu Thr Gln Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe
                20                  25                  30


    Phe Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ala
                35                  40                  45


    Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
        50                  55                  60


    Ala Ser Gln Arg Met Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly
    65                  70                  75                  80


    Pro Glu Tyr Trp Asp Gln Glu Thr Arg Asn Val Lys Ala Gln Ser Gln
                    85                  90                  95


    Thr Asp Arg Val Asp Leu Gly Thr Leu Arg Gly Tyr Tyr Asn Gln Ser
                100                 105                 110


    Glu Ala Gly Ser His Thr Ile Gln Ile Met Tyr Gly Cys Asp Val Gly
                115                 120                 125


    Ser Asp Gly Arg Phe Leu Arg Gly Tyr Arg Gln Asp Ala Tyr Asp Gly
        130                 135                 140


    Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala
    145                 150                 155                 160
```

```
Asp Met Ala Ala Gln Ile Thr Lys Arg Lys Trp Glu Ala Ala His Glu
                 165                 170             175


Ala Glu Gln Leu Arg Ala Tyr Leu Asp Gly Thr Cys Val Glu Trp Leu
             180                 185             190


Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Asp Pro
         195                 200                 205


Pro Lys Thr His Met Thr His His Pro Ile Ser Asp His Glu Ala Thr
     210                 215                 220


Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
225                 230                 235                 240


Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
                 245                 250             255


Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val
             260                 265             270


Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu
         275                 280                 285


Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Leu Ser Ser Gln Pro
     290                 295                 300


Thr Ile Pro Ile Val Gly Ile Ile Ala Gly Leu Val Leu Leu Gly Ala
305                 310                 315                 320


Val Ile Thr Gly Ala Val Val Ala Ala Val Met Trp Arg Arg Lys Ser
             325                 330                 335


Ser Asp Arg Lys Gly Gly Ser Tyr Thr Gln Ala Ala Ser Ser Asp Ser
             340                 345             350


Ala Gln Gly Ser Asp Val Ser Leu Thr Ala Cys Lys Val
             355                 360             365


<210>   2531
<211>   155
<212>   PRT
<213>   Homo sapiens

<400>   2531
```

                                    898

Met Glu Leu Arg Ser Gly Ser Val Gly Ser Gln Ala Val Ala Arg Arg
1   5   10   15

Met Asp Gly Asp Ser Arg Asp Gly Gly Gly Lys Asp Ala Thr Gly
          20   25   30

Ser Glu Asp Tyr Glu Asn Leu Pro Thr Ser Ala Ser Val Ser Thr His
          35   40   45

Met Thr Ala Gly Ala Met Ala Gly Ile Leu Glu His Ser Val Met Tyr
     50   55   60

Pro Val Asp Ser Val Lys Thr Arg Met Gln Ser Leu Ser Pro Asp Pro
65   70   75   80

Lys Ala Gln Tyr Thr Ser Ile Tyr Gly Ala Leu Lys Lys Ile Met Arg
               85   90   95

Thr Glu Gly Phe Trp Arg Pro Leu Arg Gly Val Asn Val Met Ile Met
               100   105   110

Gly Ala Gly Pro Ala His Ala Met Tyr Phe Ala Cys Tyr Glu Asn Met
          115   120   125

Lys Arg Thr Leu Asn Asp Val Phe His His Gln Gly Asn Ser His Leu
     130   135   140

Ala Asn Gly Ile Leu Lys Ala Phe Val Trp Ser
145   150   155

<210> 2532
<211> 384
<212> PRT
<213> Homo sapiens

<400> 2532

Met Lys Val Thr Ser Leu Asp Gly Arg Gln Leu Arg Lys Met Leu Arg
1   5   10   15

Lys Glu Ala Ala Ala Arg Cys Val Val Leu Asp Cys Arg Pro Tyr Leu
          20   25   30

Ala Phe Ala Ala Ser Asn Val Arg Gly Ser Leu Asn Val Asn Leu Asn
          35   40   45

Ser Val Val Leu Arg Arg Ala Arg Gly Gly Ala Val Ser Ala Arg Tyr
     50   55   60

899

Val Leu Pro Asp Glu Ala Ala Arg Ala Arg Leu Leu Gln Glu Gly Gly
65   70   75   80

Gly Gly Val Ala Ala Val Val Val Leu Asp Gln Gly Ser Arg His Trp
                    85   90   95

Gln Lys Leu Arg Glu Glu Ser Ala Ala Arg Val Val Leu Thr Ser Leu
                    100   105   110

Leu Ala Cys Leu Pro Ala Gly Pro Arg Val Tyr Phe Leu Lys Gly Gly
                    115   120   125

Tyr Glu Thr Phe Tyr Ser Glu Tyr Pro Glu Cys Cys Val Asp Val Lys
          130   135   140

Pro Ile Ser Gln Glu Lys Ile Glu Ser Glu Arg Ala Leu Ile Ser Gln
145   150   155   160

Cys Gly Lys Pro Val Val Asn Val Ser Tyr Arg Pro Ala Tyr Asp Gln
                    165   170   175

Gly Gly Pro Val Glu Ile Leu Pro Phe Leu Tyr Leu Gly Ser Ala Tyr
                    180   185   190

His Ala Ser Lys Cys Glu Phe Leu Ala Asn Leu His Ile Thr Ala Leu
          195   200   205

Leu Asn Val Ser Arg Arg Thr Ser Glu Ala Cys Met Thr His Leu His
210   215   220

Tyr Lys Trp Ile Pro Val Glu Asp Ser His Thr Ala Asp Ile Ser Ser
225   230   235   240

His Phe Gln Glu Ala Ile Asp Phe Ile Asp Cys Val Arg Glu Lys Gly
                    245   250   255

Gly Lys Val Leu Val His Cys Glu Ala Gly Ile Ser Arg Ser Pro Thr
                    260   265   270

Ile Cys Met Ala Tyr Leu Met Lys Thr Lys Gln Phe Arg Leu Lys Glu
          275   280   285

Ala Phe Asp Tyr Ile Lys Gln Arg Arg Ser Met Val Ser Pro Asn Phe
290   295   300

900

```
Gly Phe Met Gly Gln Leu Leu Gln Tyr Glu Ser Glu Ile Leu Pro Ser
305               310               315               320


Thr Pro Asn Pro Gln Pro Pro Ser Cys Gln Gly Glu Ala Ala Gly Ser
                325               330               335


Ser Leu Ile Gly His Leu Gln Thr Leu Ser Pro Asp Met Gln Gly Ala
            340               345               350


Tyr Cys Thr Phe Pro Ala Ser Val Leu Ala Pro Val Pro Thr His Ser
        355               360               365


Thr Val Ser Glu Leu Ser Arg Ser Pro Val Ala Thr Ala Thr Ser Cys
    370               375               380
```

<210> 2533
<211> 99
<212> PRT
<213> Homo sapiens

<400> 2533

```
Met Ala Gln Gly Lys Val Ala Ser Leu Gly Pro Ile Lys Gln His Thr
1               5               10              15


Phe Leu Lys Asn Met Gly Ile Asp Val Arg Leu Lys Val Leu Leu Asp
            20              25              30


Lys Ser Asn Glu Pro Ser Val Arg Gln Gln Leu Leu Gln Gly Tyr Asp
        35              40              45


Met Leu Met Asn Pro Lys Lys Met Gly Glu Arg Phe Asn Phe Phe Ala
    50              55              60


Leu Leu Pro His Gln Arg Leu Gln Gly Gly Arg Tyr Gln Arg Asn Ala
65              70              75              80


Arg Gln Ser Lys Pro Phe Ala Ser Val Val Ala Gly Phe Ser Glu Leu
            85              90              95


Ala Trp Gln
```

<210> 2534
<211> 529
<212> PRT
<213> Homo sapiens

<400> 2534

```
Met Gly Ser Ser Arg Ala Pro Trp Met Gly Arg Val Gly Gly His Gly
1               5                   10                  15

Met Met Ala Leu Leu Leu Ala Gly Leu Leu Leu Pro Gly Thr Leu Ala
            20                  25                  30

Lys Ser Ile Gly Thr Phe Ser Asp Pro Cys Lys Asp Pro Thr Arg Ile
        35                  40                  45

Thr Ser Pro Asn Asp Pro Cys Leu Thr Gly Lys Gly Asp Ser Ser Gly
    50                  55                  60

Phe Ser Ser Tyr Ser Gly Ser Ser Ser Gly Ser Ser Ile Ser Ser
65                  70                  75                  80

Ala Arg Ser Ser Gly Gly Gly Ser Ser Gly Ser Ser Ser Gly Ser Ser
                85                  90                  95

Ile Ala Gln Gly Gly Ser Ala Gly Ser Phe Lys Pro Gly Thr Gly Tyr
            100                 105                 110

Ser Gln Val Ser Tyr Ser Ser Gly Ser Gly Ser Ser Leu Gln Gly Ala
        115                 120                 125

Ser Gly Ser Ser Gln Leu Gly Ser Ser Ser His Ser Gly Ser Ser
    130                 135                 140

Gly Ser His Ser Gly Ser Ser Ser His Ser Ser Ser Ser Ser Ser
145                 150                 155                 160

Phe Gln Phe Ser Ser Ser Ser Phe Gln Val Gly Asn Gly Ser Ala Leu
                165                 170                 175

Pro Thr Asn Asp Asn Ser Tyr Arg Gly Ile Leu Asn Pro Ser Gln Pro
            180                 185                 190

Gly Gln Ser Ser Ser Ser Ser Gln Thr Ser Gly Val Ser Ser Ser Gly
        195                 200                 205

Gln Ser Val Ser Ser Asn Gln Arg Pro Cys Ser Ser Asp Ile Pro Asp
    210                 215                 220

Ser Pro Cys Ser Gly Gly Pro Ile Val Ser His Ser Gly Pro Tyr Ile
225                 230                 235                 240
```

```
Pro Ser Ser His Ser Val Ser Gly Gly Gln Arg Pro Val Val Val Val
            245                 250                 255

Val Asp Gln His Gly Ser Gly Ala Pro Gly Val Val Gln Gly Pro Pro
            260                 265                 270

Cys Ser Asn Gly Gly Leu Pro Gly Lys Pro Cys Pro Pro Ile Thr Ser
            275                 280                 285

Val Asp Lys Ser Tyr Gly Gly Tyr Glu Val Val Gly Gly Ser Ser Asp
    290                 295                 300

Ser Tyr Leu Val Pro Gly Met Thr Tyr Ser Lys Gly Lys Ile Tyr Pro
305                 310                 315                 320

Val Gly Tyr Phe Thr Lys Glu Asn Pro Val Lys Gly Ser Pro Gly Val
            325                 330                 335

Pro Ser Phe Ala Ala Gly Pro Pro Ile Ser Glu Gly Lys Tyr Phe Ser
            340                 345                 350

Ser Asn Pro Ile Ile Pro Ser Gln Ser Ala Ala Ser Ser Ala Ile Ala
            355                 360                 365

Phe Gln Pro Val Gly Thr Gly Gly Val Gln Leu Cys Gly Gly Gly Ser
    370                 375                 380

Thr Gly Ser Lys Gly Pro Cys Ser Pro Ser Ser Ser Arg Val Pro Ser
385                 390                 395                 400

Ser Ser Ser Ile Ser Ser Ser Ser Gly Ser Pro Tyr His Pro Cys Gly
            405                 410                 415

Ser Ala Ser Gln Ser Pro Cys Ser Pro Pro Gly Thr Gly Ser Phe Ser
            420                 425                 430

Ser Ser Ser Ser Ser Gln Ser Ser Gly Lys Ile Ile Leu Gln Pro Cys
            435                 440                 445

Gly Ser Lys Ser Ser Ser Ser Gly His Pro Cys Met Ser Val Ser Ser
    450                 455                 460

Leu Thr Leu Thr Gly Gly Pro Asp Gly Ser Pro His Pro Asp Pro Ser
465                 470                 475                 480
```

903

```
Ala Gly Ala Lys Pro Cys Gly Ser Ser Ser Ala Gly Lys Ile Pro Cys
              485             490             495

Arg Ser Ile Arg Asp Ile Leu Ala Gln Val Lys Pro Leu Gly Pro Gln
              500             505             510

Leu Ala Asp Pro Glu Val Phe Leu Pro Gln Gly Glu Leu Leu Asp Ser
              515             520             525

Pro
```

```
<210>  2535
<211>  125
<212>  PRT
<213>  Homo sapiens

<400>  2535

Met Pro Pro Lys Asp Asp Lys Lys Lys Asp Ala Gly Lys Ser Ala
1             5             10              15

Lys Lys Asp Lys Asp Pro Val Asn Lys Ser Gly Gly Lys Ala Lys Lys
              20              25              30

Lys Lys Trp Ser Lys Gly Lys Val Arg Asp Lys Leu Asn Asn Leu Val
        35              40              45

Leu Phe Asp Lys Ala Thr Tyr Asp Lys Leu Cys Lys Glu Val Pro Asn
    50              55              60

Tyr Lys Leu Ile Thr Pro Ala Val Val Ser Glu Arg Leu Lys Ile Arg
65              70              75              80

Gly Ser Leu Ala Arg Ala Ala Leu Gln Glu Leu Leu Ser Lys Gly Leu
            85              90              95

Ile Lys Leu Val Ser Lys His Arg Ala Gln Val Ile Tyr Thr Arg Asn
            100             105             110

Thr Lys Gly Gly Asp Ala Pro Ala Ala Gly Glu Asp Ala
        115             120             125
```

```
<210>  2536
<211>  335
<212>  PRT
<213>  Homo sapiens

<400>  2536
```

```
Met Gly Lys Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg
1               5                   10                  15

Leu Val Thr Arg Ala Ala Phe Asn Ser Gly Lys Val Asp Ile Val Ala
            20                  25                  30

Ile Asn Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln
            35                  40                  45

Tyr Asp Ser Thr His Gly Lys Phe His Gly Thr Val Lys Ala Glu Asn
        50                  55                  60

Gly Lys Leu Val Ile Asn Gly Asn Pro Ile Thr Ile Phe Gln Glu Arg
65                  70                  75                  80

Asp Pro Ser Lys Ile Lys Trp Gly Asp Ala Gly Ala Glu Tyr Val Val
                85                  90                  95

Glu Ser Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu
            100                 105                 110

Gln Gly Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala
        115                 120                 125

Pro Met Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu
        130                 135                 140

Lys Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu
145                 150                 155                 160

Ala Lys Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr
            165                 170                 175

Thr Val His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser
            180                 185                 190

Gly Lys Leu Trp Arg Asp Gly Arg Gly Ala Leu Gln Asn Ile Ile Pro
        195                 200                 205

Ala Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu
        210                 215                 220

Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Ala Asn Val
225                 230                 235                 240
```

905

Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp
                245   250   255

Asp Ile Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly
                260   265   270

Ile Leu Gly Tyr Thr Glu His Gln Val Val Ser Ser Asp Phe Asn Ser
                275   280   285

Asp Thr His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn
        290   295   300

Asp His Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Phe Gly Tyr
305   310   315   320

Ser Asn Arg Val Val Asp Leu Met Ala His Met Ala Ser Lys Glu
                325   330   335

<210>   2537
<211>   114
<212>   PRT
<213>   Homo sapiens

<400>   2537

Met Ala Ser Val Ser Glu Leu Ala Cys Ile Tyr Ser Ala Leu Ile Leu
1   5   10   15

His Asp Asp Glu Val Thr Val Thr Glu Asp Lys Ile Asn Ala Leu Ile
                20   25   30

Lys Ala Ala Gly Val Asn Val Glu Pro Phe Trp Pro Gly Leu Phe Ala
            35   40   45

Lys Ala Leu Ala Asn Val Asn Ile Gly Ser Leu Ile Cys Asn Val Gly
        50   55   60

Ala Gly Gly Pro Ala Pro Ala Ala Gly Ala Ala Pro Ala Gly Gly Pro
65   70   75   80

Ala Pro Ser Thr Ala Ala Ala Pro Ala Glu Glu Lys Lys Val Glu Ala
                85   90   95

Lys Lys Glu Glu Ser Glu Glu Ser Asp Asp Asp Met Gly Phe Gly Leu
                100   105   110

Phe Asp

906

```
<210>   2538
<211>   142
<212>   PRT
<213>   Homo sapiens

<400>   2538

Met Ala Ala Gly Gly Ser Asp Pro Arg Ala Gly Asp Val Glu Glu Asp
1               5                   10                  15


Ala Ser Gln Leu Ile Phe Pro Lys Glu Phe Glu Thr Ala Glu Thr Leu
                20                  25                  30


Leu Asn Ser Glu Val His Met Leu Leu Glu His Arg Lys Gln Gln Asn
            35                  40                  45


Glu Ser Ala Glu Asp Glu Gln Glu Leu Ser Glu Val Phe Met Lys Thr
        50                  55                  60


Leu Asn Tyr Thr Ala Arg Phe Ser Arg Phe Lys Asn Arg Glu Thr Ile
65                  70                  75                  80


Ala Ser Val Arg Ser Leu Leu Leu Gln Lys Lys Leu His Lys Phe Glu
                85                  90                  95


Leu Ala Cys Leu Ala Asn Leu Cys Pro Glu Thr Ala Glu Glu Ser Lys
            100                 105                 110


Ala Leu Ile Pro Ser Leu Glu Gly Arg Phe Glu Asp Glu Glu Leu Gln
            115                 120                 125


Gln Ile Leu Asp Asp Ile Gln Thr Lys Arg Ser Phe Gln Tyr
        130                 135                 140


<210>   2539
<211>   178
<212>   PRT
<213>   Homo sapiens

<400>   2539

Met Pro Ala Tyr His Ser Ser Leu Met Asp Pro Asp Thr Lys Leu Ile
1               5                   10                  15


Gly Asn Met Ala Leu Leu Pro Ile Arg Ser Gln Phe Lys Gly Pro Ala
                20                  25                  30


Pro Arg Glu Thr Lys Asp Thr Asp Ile Val Asp Glu Ala Ile Tyr Tyr
```

```
             35                      40                         45
```

Phe Lys Ala Asn Val Phe Phe Lys Asn Tyr Glu Ile Lys Asn Glu Ala
    50   55   60

Asp Arg Thr Leu Ile Tyr Ile Thr Leu Tyr Ile Ser Glu Cys Leu Lys
65   70   75   80

Lys Leu Gln Lys Cys Asn Ser Lys Ser Gln Gly Glu Lys Glu Met Tyr
                85   90   95

Thr Leu Gly Ile Thr Asn Phe Pro Ile Pro Gly Glu Pro Gly Phe Pro
            100   105   110

Leu Asn Ala Ile Tyr Ala Lys Pro Ala Asn Lys Gln Glu Asp Glu Val
        115   120   125

Met Arg Ala Tyr Leu Gln Gln Leu Arg Gln Glu Thr Gly Leu Arg Leu
    130   135   140

Cys Glu Lys Val Phe Asp Pro Gln Asn Asp Lys Pro Ser Lys Trp Trp
145   150   155   160

Thr Cys Phe Val Lys Arg Gln Phe Met Asn Lys Ser Leu Ser Gly Pro
                165   170   175

Gly Gln

<210> 2540
<211> 351
<212> PRT
<213> Homo sapiens

<400> 2540

Met Glu Thr Asn Phe Ser Thr Pro Leu Asn Glu Tyr Glu Glu Val Ser
1   5   10   15

Tyr Glu Ser Ala Gly Tyr Thr Val Leu Arg Ile Leu Pro Leu Val Val
            20   25   30

Leu Gly Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile
            35   40   45

Trp Val Ala Gly Phe Arg Met Thr Arg Thr Val Thr Thr Ile Cys Tyr
    50   55   60

Leu Asn Leu Ala Leu Ala Asp Phe Ser Phe Thr Ala Thr Leu Pro Phe
65   70   75   80

Leu Ile Val Ser Met Ala Met Gly Glu Lys Trp Pro Phe Gly Trp Phe
                85   90   95

Leu Cys Lys Leu Ile His Ile Val Val Asp Ile Asn Leu Phe Gly Ser
            100   105   110

Val Phe Leu Ile Gly Phe Ile Ala Leu Asp Arg Cys Ile Cys Val Leu
            115   120   125

His Pro Val Trp Ala Gln Asn His Arg Thr Val Ser Leu Ala Met Lys
    130   135   140

Val Ile Val Gly Pro Trp Ile Leu Ala Leu Val Leu Thr Leu Pro Val
145   150   155   160

Phe Leu Phe Leu Thr Thr Val Thr Ile Pro Asn Gly Asp Thr Tyr Cys
                165   170   175

Thr Phe Asn Phe Ala Ser Trp Gly Gly Thr Pro Glu Glu Arg Leu Lys
            180   185   190

Val Ala Ile Thr Met Leu Thr Ala Arg Gly Ile Ile Arg Phe Val Ile
            195   200   205

Gly Phe Ser Leu Pro Met Ser Ile Val Ala Ile Cys Tyr Gly Leu Ile
    210   215   220

Ala Ala Lys Ile His Lys Lys Gly Met Ile Lys Ser Ser Arg Pro Leu
225   230   235   240

Arg Val Leu Thr Ala Val Val Ala Ser Phe Phe Ile Cys Trp Phe Pro
            245   250   255

Phe Gln Leu Val Ala Leu Leu Gly Thr Val Trp Leu Lys Glu Met Leu
            260   265   270

Phe Tyr Gly Lys Tyr Lys Ile Ile Asp Ile Leu Val Asn Pro Thr Ser
            275   280   285

Ser Leu Ala Phe Phe Asn Ser Cys Leu Asn Pro Met Leu Tyr Val Phe
    290   295   300

```
Val Gly Gln Asp Phe Arg Glu Arg Leu Ile His Ser Leu Pro Thr Ser
305                 310             315             320


Leu Glu Arg Ala Leu Ser Glu Asp Ser Ala Pro Thr Asn Asp Thr Ala
                325             330             335


Ala Asn Ser Ala Ser Pro Pro Ala Glu Thr Glu Leu Gln Ala Met
            340             345             350
```

```
<210>   2541
<211>   349
<212>   PRT
<213>   Homo sapiens

<400>   2541
```

```
Met Glu Thr Pro Pro Val Asn Thr Ile Gly Glu Lys Asp Thr Ser Gln
1               5               10              15


Pro Gln Gln Glu Trp Glu Lys Asn Leu Arg Glu Asn Leu Asp Ser Val
            20              25              30


Ile Gln Ile Arg Gln Gln Pro Arg Asp Pro Pro Thr Glu Thr Leu Glu
        35              40              45


Leu Glu Val Ser Pro Asp Pro Ala Ser Gln Ile Leu Glu His Thr Gln
    50              55              60


Gly Ala Glu Lys Leu Val Ala Glu Leu Glu Gly Asp Ser His Lys Ser
65              70              75              80


His Gly Ser Thr Ser Gln Met Pro Glu Ala Leu Gln Ala Ser Asp Leu
            85              90              95


Trp Tyr Cys Pro Asp Gly Ser Phe Val Lys Lys Ile Val Ile Arg Gly
            100             105             110


His Gly Leu Asp Lys Pro Lys Leu Gly Ser Cys Cys Arg Val Leu Ala
        115             120             125


Leu Gly Phe Pro Phe Gly Ser Gly Pro Pro Glu Gly Trp Thr Glu Leu
    130             135             140


Thr Met Gly Val Gly Pro Trp Arg Glu Glu Thr Trp Gly Glu Leu Ile
145             150             155             160


Glu Lys Cys Leu Glu Ser Met Cys Gln Gly Glu Glu Ala Glu Leu Gln
            165             170             175
```

Leu Pro Gly His Ser Gly Pro Pro Val Arg Leu Thr Leu Ala Ser Phe
        180   185   190

Thr Gln Gly Arg Asp Ser Trp Glu Leu Glu Thr Ser Glu Lys Glu Ala
        195   200   205

Leu Ala Arg Glu Glu Arg Ala Arg Gly Thr Glu Leu Phe Arg Ala Gly
    210   215   220

Asn Pro Glu Gly Ala Ala Arg Cys Tyr Gly Arg Ala Leu Arg Leu Leu
225   230   235   240

Leu Thr Leu Pro Pro Pro Gly Pro Pro Glu Arg Thr Val Leu His Ala
                245   250   255

Asn Leu Ala Ala Cys Gln Leu Leu Leu Gly Gln Pro Gln Leu Ala Ala
                260   265   270

Gln Ser Cys Asp Arg Val Leu Glu Arg Glu Pro Gly His Leu Lys Ala
        275   280   285

Leu Tyr Arg Arg Gly Val Ala Gln Ala Ala Leu Gly Asn Leu Glu Lys
    290   295   300

Ala Thr Ala Asp Leu Lys Lys Val Leu Ala Ile Asp Pro Lys Asn Arg
305   310   315   320

Ala Ala Gln Glu Glu Leu Gly Lys Val Val Ile Gln Gly Lys Asn Gln
                325   330   335

Asp Ala Gly Leu Ala Gln Gly Leu Arg Lys Met Phe Gly
        340   345

<210>   2542
<211>   417
<212>   PRT
<213>   Homo sapiens

<400>   2542

Met Gly Arg Arg Arg Ala Pro Glu Leu Tyr Arg Ala Pro Phe Pro Leu
1   5   10   15

Tyr Ala Leu Gln Val Asp Pro Ser Thr Gly Leu Leu Ile Ala Ala Gly
        20   25   30

911

```
Gly Gly Gly Ala Ala Lys Thr Gly Ile Lys Asn Gly Val His Phe Leu
        35                  40                  45


Gln Leu Glu Leu Ile Asn Gly Arg Leu Ser Ala Ser Leu Leu His Ser
        50                  55                  60


His Asp Thr Glu Thr Arg Ala Thr Met Asn Leu Ala Leu Ala Gly Asp
65                  70                  75                  80


Ile Leu Ala Ala Gly Gln Asp Ala His Cys Gln Leu Leu Arg Phe Gln
                85                  90                  95


Ala His Gln Gln Gln Gly Asn Lys Ala Glu Lys Ala Gly Ser Lys Glu
                100                 105                 110


Gln Gly Pro Arg Gln Arg Lys Gly Ala Ala Pro Ala Glu Lys Lys Cys
        115                 120                 125


Gly Ala Glu Thr Gln His Glu Gly Leu Glu Leu Arg Val Glu Asn Leu
        130                 135                 140


Gln Ala Val Gln Thr Asp Phe Ser Ser Asp Pro Leu Gln Lys Val Val
145                 150                 155                 160


Cys Phe Asn His Asp Asn Thr Leu Leu Ala Thr Gly Gly Thr Asp Gly
                165                 170                 175


Tyr Val Arg Val Trp Lys Val Pro Ser Leu Glu Lys Val Leu Glu Phe
                180                 185                 190


Lys Ala His Glu Gly Glu Ile Glu Asp Leu Ala Leu Gly Pro Asp Gly
        195                 200                 205


Lys Leu Val Thr Val Gly Arg Asp Leu Lys Ala Ser Val Trp Gln Lys
        210                 215                 220


Asp Gln Leu Val Thr Gln Leu His Trp Gln Glu Asn Gly Pro Thr Phe
225                 230                 235                 240


Ser Ser Thr Pro Tyr Arg Tyr Gln Ala Cys Arg Phe Gly Gln Val Pro
                245                 250                 255


Asp Gln Pro Ala Gly Leu Arg Leu Phe Thr Val Gln Ile Pro His Lys
                260                 265                 270


Arg Leu Arg Gln Pro Pro Pro Cys Tyr Leu Thr Ala Trp Asp Gly Ser
```

```
            275                     280                     285
```

```
Asn Phe Leu Pro Leu Arg Thr Lys Ser Cys Gly His Glu Val Val Ser
    290                 295                 300
```

```
Cys Leu Asp Val Ser Glu Ser Gly Thr Phe Leu Gly Leu Gly Thr Val
305                 310                 315                 320
```

```
Thr Gly Ser Val Ala Ile Tyr Ile Ala Phe Ser Leu Gln Cys Leu Tyr
                325                 330                 335
```

```
Tyr Val Arg Glu Ala His Gly Ile Val Val Thr Asp Val Ala Phe Leu
            340                 345                 350
```

```
Pro Glu Lys Gly Arg Gly Pro Glu Leu Leu Gly Ser His Glu Thr Ala
        355                 360                 365
```

```
Leu Phe Ser Val Ala Val Asp Ser Arg Cys Gln Leu His Leu Leu Pro
    370                 375                 380
```

```
Ser Arg Arg Ser Val Pro Val Trp Leu Leu Leu Leu Leu Cys Val Gly
385                 390                 395                 400
```

```
Leu Ile Ile Val Thr Ile Leu Leu Leu Gln Ser Ala Phe Pro Gly Phe
                405                 410                 415
```

```
Leu
```

```
<210>   2543
<211>   309
<212>   PRT
<213>   Homo sapiens
```

```
<400>   2543
```

```
Met Arg Gln Asn Asp Lys Ile Met Cys Ile Leu Glu Asn Arg Lys Lys
1                   5                   10                  15
```

```
Arg Asp Arg Lys Asn Leu Cys Arg Ala Ile Asn Asp Phe Gln Gln Ser
            20                  25                  30
```

```
Phe Gln Lys Pro Glu Thr Arg Arg Glu Phe Asp Leu Ser Asp Pro Leu
        35                  40                  45
```

```
Ala Leu Lys Lys Asp Leu Pro Ala Arg Gln Ser Asp Asn Asp Val Arg
    50                  55                  60
```

```
Asn Thr Ile Ser Gly Met Gln Lys Phe Met Gly Glu Asp Leu Asn Phe
65              70          75              80


His Glu Arg Lys Lys Phe Gln Glu Glu Gln Asn Arg Glu Trp Ser Leu
            85          90              95


Gln Gln Gln Arg Glu Trp Lys Asn Ala Arg Ala Glu Gln Lys Cys Ala
        100         105         110


Glu Ala Leu Tyr Thr Glu Thr Arg Leu Gln Phe Asp Glu Thr Ala Lys
        115             120             125


His Leu Gln Lys Leu Glu Ser Thr Thr Arg Lys Ala Val Cys Ala Ser
    130             135             140


Val Lys Asp Phe Asn Lys Ser Gln Ala Ile Glu Ser Val Glu Arg Lys
145             150             155             160


Lys Gln Glu Lys Lys Gln Glu Gln Glu Asp Asn Leu Ala Glu Ile Thr
            165             170             175


Asn Leu Leu Arg Gly Asp Leu Leu Ser Glu Asn Pro Gln Gln Ala Ala
        180             185             190


Ser Ser Phe Gly Pro His Arg Val Val Pro Asp Arg Trp Lys Gly Met
    195             200             205


Thr Gln Glu Gln Leu Glu Gln Ile Arg Leu Val Gln Lys Gln Gln Ile
    210             215             220


Gln Glu Lys Leu Arg Leu Gln Glu Glu Lys Arg Gln Arg Asp Leu Asp
225             230             235             240


Trp Asp Arg Arg Arg Ile Gln Gly Ala Arg Ala Thr Leu Leu Phe Glu
            245             250             255


Arg Gln Gln Trp Arg Arg Gln Arg Asp Leu Arg Arg Ala Leu Asp Ser
            260             265             270


Ser Asn Leu Ser Leu Ala Lys Glu Gln His Leu Gln Lys Lys Tyr Met
    275             280             285


Asn Glu Val Tyr Thr Asn Gln Pro Thr Gly Asp Tyr Phe Thr Gln Phe
    290             295             300
```

914

Asn Thr Gly Ser Arg
305

<210>   2544
<211>   838
<212>   PRT
<213>   Homo sapiens

<400>   2544

Met Gln Glu Gln Glu Ile Gly Phe Ile Ser Lys Tyr Asn Glu Gly Leu
1   5   10   15

Cys Val Asn Thr Asp Pro Val Ser Ile Leu Thr Ser Ile Leu Asp Met
                20   25   30

Ser Leu His Arg Gln Met Gly Ser Asp Arg Asp Leu Gln Ser Ser Ala
                35   40   45

Ser Ser Val Ser Leu Pro Ser Val Lys Lys Ala Pro Lys Lys Arg Arg
        50   55   60

Ile Ser Ile Gly Ser Leu Phe Arg Arg Lys Lys Asp Asn Lys Arg Lys
65   70   75   80

Ser Arg Glu Leu Asn Gly Gly Val Asp Gly Ile Ala Ser Ile Glu Ser
                85   90   95

Ile His Ser Glu Met Cys Thr Asp Lys Asn Ser Ile Phe Ser Thr Asn
                100   105   110

Thr Ser Ser Asp Asn Gly Leu Thr Ser Ile Ser Lys Gln Ile Gly Asp
        115   120   125

Phe Ile Glu Cys Pro Leu Cys Leu Leu Arg His Ser Lys Asp Arg Phe
130   135   140

Pro Asp Ile Met Thr Cys His His Arg Ser Cys Val Asp Cys Leu Arg
145   150   155   160

Gln Tyr Leu Arg Ile Glu Ile Ser Glu Ser Arg Val Asn Ile Ser Cys
                165   170   175

Pro Glu Cys Thr Glu Arg Phe Asn Pro His Asp Ile Arg Leu Ile Leu
                180   185   190

Ser Asp Asp Val Leu Met Glu Lys Tyr Glu Glu Phe Met Leu Arg Arg
        195   200   205

```
Trp Leu Val Ala Asp Pro Asp Cys Arg Trp Cys Pro Ala Pro Asp Cys
    210             215             220

Gly Tyr Ala Val Ile Ala Phe Gly Cys Ala Ser Cys Pro Lys Leu Thr
225             230             235             240

Cys Gly Arg Glu Gly Cys Gly Thr Glu Phe Cys Tyr His Cys Lys Gln
            245             250             255

Ile Trp His Pro Asn Gln Thr Cys Asp Ala Ala Arg Gln Glu Arg Ala
            260             265             270

Gln Ser Leu Arg Leu Arg Thr Ile Arg Ser Ser Ser Ile Ser Tyr Ser
        275             280             285

Gln Glu Ser Gly Ala Ala Ala Asp Asp Ile Lys Pro Cys Pro Arg Cys
    290             295             300

Ala Ala Tyr Ile Ile Lys Met Asn Asp Gly Ser Cys Asn His Met Thr
305             310             315             320

Cys Ala Val Cys Gly Cys Glu Phe Cys Trp Leu Cys Met Lys Glu Ile
            325             330             335

Ser Asp Leu His Tyr Leu Ser Pro Ser Gly Cys Thr Phe Trp Gly Lys
        340             345             350

Lys Pro Trp Ser Arg Lys Lys Lys Ile Leu Trp Gln Leu Gly Thr Leu
        355             360             365

Val Gly Ala Pro Val Gly Ile Ala Leu Ile Ala Gly Ile Ala Ile Pro
    370             375             380

Ala Met Ile Ile Gly Ile Pro Val Tyr Val Gly Arg Lys Ile His Asn
385             390             395             400

Arg Tyr Glu Gly Lys Asp Val Ser Lys His Lys Arg Asn Leu Ala Ile
            405             410             415

Ala Gly Gly Val Thr Leu Ser Val Ile Val Ser Pro Val Val Ala Ala
            420             425             430

Val Thr Val Gly Ile Gly Val Pro Ile Met Leu Ala Tyr Val Tyr Gly
        435             440             445
```

Val Val Pro Ile Ser Leu Cys Arg Ser Gly Gly Cys Gly Val Ser Ala
    450   455   460

Gly Asn Gly Lys Gly Val Arg Ile Glu Phe Asp Asp Glu Asn Asp Ile
465   470   475   480

Asn Val Gly Gly Thr Asn Thr Ala Val Asp Thr Thr Ser Val Ala Glu
                485   490   495

Ala Arg His Asn Pro Ser Ile Gly Glu Gly Ser Val Gly Gly Leu Thr
            500   505   510

Gly Ser Leu Ser Ala Ser Gly Ser His Met Asp Arg Ile Gly Ala Ile
        515   520   525

Arg Asp Asn Leu Ser Glu Thr Ala Ser Thr Met Ala Leu Ala Gly Ala
    530   535   540

Ser Ile Thr Gly Ser Leu Ser Gly Ser Ala Met Val Asn Cys Phe Asn
545   550   555   560

Arg Leu Glu Val Gln Ala Asp Val Gln Lys Glu Arg Tyr Ser Leu Ser
                565   570   575

Gly Glu Ser Gly Thr Val Ser Leu Gly Thr Val Ser Asp Asn Ala Ser
            580   585   590

Thr Lys Ala Met Ala Gly Ser Ile Leu Asn Ser Tyr Ile Pro Leu Asp
        595   600   605

Lys Glu Gly Asn Ser Met Glu Val Gln Val Asp Ile Glu Ser Lys Pro
    610   615   620

Ser Lys Phe Arg His Asn Ser Gly Ser Ser Ser Val Asp Asp Gly Ser
625   630   635   640

Ala Thr Arg Ser Tyr Ala Gly Gly Ser Ser Ser Gly Leu Pro Glu Gly
            645   650   655

Lys Ser Ser Ala Thr Lys Trp Ser Lys Glu Ala Thr Ala Gly Lys Lys
        660   665   670

Ser Lys Ser Gly Lys Leu Arg Lys Lys Gly Asn Met Lys Ile Asn Glu
    675   680   685

917

```
Thr Arg Glu Asp Met Asp Ala Gln Leu Leu Glu Gln Gln Ser Thr Asn
    690             695                 700

Ser Ser Glu Phe Glu Ala Pro Ser Leu Ser Asp Ser Met Pro Ser Val
705             710                 715                 720

Ala Asp Ser His Ser Ser His Phe Ser Glu Phe Ser Cys Ser Asp Leu
            725                 730                 735

Glu Ser Met Lys Thr Ser Cys Ser His Gly Ser Ser Asp Tyr His Thr
            740                 745                 750

Arg Phe Ala Thr Val Asn Ile Leu Pro Glu Val Glu Asn Asp Arg Leu
        755                 760                 765

Glu Asn Ser Pro His Gln Cys Ser Ile Ser Val Val Thr Gln Thr Ala
    770                 775                 780

Ser Cys Ser Glu Val Ser Gln Leu Asn His Ile Ala Glu Glu His Gly
785             790                 795                 800

Asn Asn Gly Ile Lys Pro Asn Val Asp Leu Tyr Phe Gly Asp Ala Leu
            805                 810                 815

Lys Glu Thr Asn Asn Asn His Ser His Gln Thr Met Glu Leu Lys Val
            820                 825                 830

Ala Ile Gln Thr Glu Ile
        835


<210>  2545
<211>  1539
<212>  PRT
<213>  Homo sapiens

<400>  2545

Met Glu Pro Gly Cys Asp Glu Phe Leu Pro Pro Glu Cys Pro Val
1               5               10                  15

Phe Glu Pro Ser Trp Ala Glu Phe Gln Asp Pro Leu Gly Tyr Ile Ala
            20                  25                  30

Lys Ile Arg Pro Ile Ala Glu Lys Ser Gly Ile Cys Lys Ile Arg Pro
        35                  40                  45

Pro Ala Asp Trp Gln Pro Pro Phe Ala Val Glu Val Asp Asn Phe Arg
    50                  55                  60
```

918

Phe Thr Pro Arg Val Gln Arg Leu Asn Glu Leu Glu Ala Gln Thr Arg
65   70   75   80

Val Lys Leu Asn Tyr Leu Asp Gln Ile Ala Lys Phe Trp Glu Ile Gln
                85   90   95

Gly Ser Ser Leu Lys Ile Pro Asn Val Glu Arg Lys Ile Leu Asp Leu
            100   105   110

Tyr Ser Leu Ser Lys Ile Val Ile Glu Glu Gly Gly Tyr Glu Ala Ile
        115   120   125

Cys Lys Asp Arg Arg Trp Ala Arg Val Ala Gln Arg Leu His Tyr Pro
    130   135   140

Pro Gly Lys Asn Ile Gly Ser Leu Leu Arg Ser His Tyr Glu Arg Ile
145   150   155   160

Ile Tyr Pro Tyr Glu Met Phe Gln Ser Gly Ala Asn His Val Gln Cys
                165   170   175

Asn Thr His Pro Phe Asp Asn Glu Val Lys Asp Lys Glu Tyr Lys Pro
            180   185   190

His Ser Ile Pro Leu Arg Gln Ser Val Gln Pro Ser Lys Phe Ser Ser
        195   200   205

Tyr Ser Arg Arg Ala Lys Arg Leu Gln Pro Asp Pro Glu Pro Thr Glu
    210   215   220

Glu Asp Ile Glu Lys His Pro Glu Leu Lys Lys Leu Gln Ile Tyr Gly
225   230   235   240

Pro Gly Pro Lys Met Met Gly Leu Gly Leu Met Ala Lys Asp Lys Asp
            245   250   255

Lys Thr Val His Lys Lys Val Thr Cys Pro Pro Thr Val Thr Val Lys
            260   265   270

Asp Glu Gln Ser Gly Gly Gly Asn Val Ser Ser Thr Leu Leu Lys Gln
            275   280   285

His Leu Ser Leu Glu Pro Cys Thr Lys Thr Thr Met Gln Leu Arg Lys
    290   295   300

919

Asn His Ser Ser Ala Gln Phe Ile Asp Ser Tyr Ile Cys Gln Val Cys
305   310   315   320

Ser Arg Gly Asp Glu Asp Asn Lys Leu Leu Phe Cys Asp Gly Cys Asp
                325   330   335

Asp Asn Tyr His Ile Phe Cys Leu Leu Pro Pro Leu Pro Glu Ile Pro
            340   345   350

Arg Gly Ile Trp Arg Cys Pro Lys Cys Ile Leu Ala Glu Cys Lys Gln
            355   360   365

Pro Pro Glu Ala Phe Gly Phe Glu Gln Ala Thr Gln Glu Tyr Ser Leu
    370   375   380

Gln Ser Phe Gly Glu Met Ala Asp Ser Phe Lys Ser Asp Tyr Phe Asn
385   390   395   400

Met Pro Val His Met Val Pro Thr Glu Leu Val Glu Lys Glu Phe Trp
            405   410   415

Arg Leu Val Ser Ser Ile Glu Glu Asp Val Thr Val Glu Tyr Gly Ala
            420   425   430

Asp Ile His Ser Lys Glu Phe Gly Ser Gly Phe Pro Val Ser Asn Ser
        435   440   445

Lys Gln Asn Leu Ser Pro Glu Glu Lys Glu Tyr Ala Thr Ser Gly Trp
    450   455   460

Asn Leu Asn Val Met Pro Val Leu Asp Gln Ser Val Leu Cys His Ile
465   470   475   480

Asn Ala Asp Ile Ser Gly Met Lys Val Pro Trp Leu Tyr Val Gly Met
            485   490   495

Val Phe Ser Ala Phe Cys Trp His Ile Glu Asp His Trp Ser Tyr Ser
        500   505   510

Ile Asn Tyr Leu His Trp Gly Glu Pro Lys Thr Trp Tyr Gly Val Pro
    515   520   525

Ser Leu Ala Ala Glu His Leu Glu Glu Val Met Lys Met Leu Thr Pro
    530   535   540

Glu Leu Phe Asp Ser Gln Pro Asp Leu Leu His Gln Leu Val Thr Leu
545   550   555   560

Met Asn Pro Asn Thr Leu Met Ser His Gly Val Pro Val Val Arg Thr
                565   570   575

Asn Gln Cys Ala Gly Glu Phe Val Ile Thr Phe Pro Arg Ala Tyr His
            580   585   590

Ser Gly Phe Asn Gln Gly Tyr Asn Phe Ala Glu Ala Val Asn Phe Cys
            595   600   605

Thr Ala Asp Trp Leu Pro Ala Gly Arg Gln Cys Ile Glu His Tyr Arg
    610   615   620

Arg Leu Arg Arg Tyr Cys Val Phe Ser His Glu Glu Leu Ile Cys Lys
625   630   635   640

Met Ala Ala Phe Pro Glu Thr Leu Asp Leu Asn Leu Ala Val Ala Val
            645   650   655

His Lys Glu Met Phe Ile Met Val Gln Glu Glu Arg Arg Leu Arg Lys
            660   665   670

Ala Leu Leu Glu Lys Gly Val Thr Glu Ala Glu Arg Glu Ala Phe Glu
            675   680   685

Leu Leu Pro Asp Asp Glu Arg Gln Cys Ile Lys Cys Lys Thr Thr Cys
            690   695   700

Phe Leu Ser Ala Leu Ala Cys Tyr Asp Cys Pro Asp Gly Leu Val Cys
705   710   715   720

Leu Ser His Ile Asn Asp Leu Cys Lys Cys Ser Ser Ser Arg Gln Tyr
                725   730   735

Leu Arg Tyr Arg Tyr Thr Leu Asp Glu Leu Pro Thr Met Leu His Lys
            740   745   750

Leu Lys Ile Arg Ala Glu Ser Phe Asp Thr Trp Ala Asn Lys Val Arg
            755   760   765

Val Ala Leu Glu Val Glu Asp Gly Arg Lys Arg Ser Phe Glu Glu Leu
    770   775   780

Arg Ala Leu Glu Ser Glu Ala Arg Glu Arg Arg Phe Pro Asn Ser Glu

```
785                    790                    795                    800
```

Leu Leu Gln Arg Leu Lys Asn Cys Leu Ser Glu Val Glu Ala Cys Ile
            805   810   815

Ala Gln Val Leu Gly Leu Val Ser Gly Gln Val Ala Arg Met Asp Thr
            820   825   830

Pro Gln Leu Thr Leu Thr Glu Leu Arg Val Leu Leu Glu Gln Met Gly
            835   840   845

Ser Leu Pro Cys Ala Met His Gln Ile Gly Asp Val Lys Asp Val Leu
    850   855   860

Glu Gln Val Glu Ala Tyr Gln Ala Glu Ala Arg Glu Ala Leu Ala Thr
865   870   875   880

Leu Pro Ser Ser Pro Gly Leu Leu Arg Ser Leu Leu Glu Arg Gly Gln
            885   890   895

Gln Leu Gly Val Glu Val Pro Glu Ala His Gln Leu Gln Gln Gln Val
            900   905   910

Glu Gln Ala Gln Trp Leu Asp Glu Val Lys Gln Ala Leu Ala Pro Ser
    915   920   925

Ala His Arg Gly Ser Leu Val Ile Met Gln Gly Leu Leu Val Met Gly
    930   935   940

Ala Lys Ile Ala Ser Ser Pro Ser Val Asp Lys Ala Arg Ala Glu Leu
945   950   955   960

Gln Glu Leu Leu Thr Ile Ala Glu Arg Trp Glu Glu Lys Ala His Phe
            965   970   975

Cys Leu Glu Ala Arg Gln Lys His Pro Pro Ala Thr Leu Glu Ala Ile
            980   985   990

Ile Arg Glu Thr Glu Asn Ile Pro Val His Leu Pro Asn Ile Gln Ala
            995   1000   1005

Leu Lys Glu Ala Leu Thr Lys Ala Gln Ala Trp Ile Ala Asp Val
    1010   1015   1020

Asp Glu Ile Gln Asn Gly Asp His Tyr Pro Cys Leu Asp Asp Leu
    1025   1030   1035

922

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```
Glu Gly  Leu Val Ala Val Gly  Arg Asp Leu Pro Val  Gly Leu Glu
    1040             1045             1050


Glu Leu  Arg Gln Leu Glu Leu  Gln Val Leu Thr Ala  His Ser Trp
    1055             1060             1065


Arg Glu  Lys Ala Ser Lys Thr  Phe Leu Lys Lys Asn  Ser Cys Tyr
    1070             1075             1080


Thr Leu  Leu Glu Val Leu Cys  Pro Cys Ala Asp Ala  Gly Ser Asp
    1085             1090             1095


Ser Thr  Lys Arg Ser Arg Trp  Met Glu Lys Ala Leu  Gly Leu Tyr
    1100             1105             1110


Gln Cys  Asp Thr Glu Leu Leu  Gly Leu Ser Ala Gln  Asp Leu Arg
    1115             1120             1125


Asp Pro  Gly Ser Val Ile Val  Ala Phe Lys Glu Gly  Glu Gln Lys
    1130             1135             1140


Glu Lys  Glu Gly Ile Leu Gln  Leu Arg Arg Thr Asn  Ser Ala Lys
    1145             1150             1155


Pro Ser  Pro Leu Ala Pro Ser  Leu Met Ala Ser Ser  Pro Thr Ser
    1160             1165             1170


Ile Cys  Val Cys Gly Gln Val  Pro Ala Gly Val Gly  Leu Leu Gln
    1175             1180             1185


Cys Asp  Leu Cys Gln Asp Trp  Phe His Gly Gln Cys  Val Ser Val
    1190             1195             1200


Pro His  Leu Leu Thr Ser Pro  Lys Pro Ser Leu Thr  Ser Ser Pro
    1205             1210             1215


Leu Leu  Ala Trp Trp Glu Trp  Asp Thr Lys Phe Leu  Cys Pro Leu
    1220             1225             1230


Cys Met  Arg Ser Arg Arg Pro  Arg Leu Glu Thr Ile  Leu Ala Leu
    1235             1240             1245


Leu Val  Ala Leu Gln Arg Leu  Pro Val Arg Leu Pro  Glu Gly Glu
    1250             1255             1260
```

923

```
Ala Leu Gln Cys Leu Thr Glu Arg Ala Ile Gly Trp Gln Asp Arg
    1265             1270             1275


Ala Arg Lys Ala Leu Ala Phe Glu Asp Val Thr Ala Leu Leu Arg
    1280             1285             1290


Gln Leu Ala Glu Leu Arg Gln Gln Leu Gln Ala Lys Pro Arg Pro
    1295             1300             1305


Glu Glu Ala Ser Val Tyr Thr Ser Ala Thr Ala Cys Asp Pro Ile
    1310             1315             1320


Arg Glu Gly Ser Gly Asn Asn Ile Ser Lys Val Gln Gly Leu Leu
    1325             1330             1335


Glu Asn Gly Asp Ser Val Thr Ser Pro Glu Asn Met Ala Pro Gly
    1340             1345             1350


Lys Gly Ser Asp Leu Glu Leu Leu Ser Ser Leu Leu Pro Gln Leu
    1355             1360             1365


Thr Gly Pro Val Leu Glu Leu Pro Glu Ala Ile Arg Ala Pro Leu
    1370             1375             1380


Glu Glu Leu Met Met Glu Gly Gly Leu Leu Glu Val Thr Leu Asp
    1385             1390             1395


Glu Asn His Ser Ile Trp Gln Leu Leu Gln Ala Gly Gln Pro Pro
    1400             1405             1410


Asp Leu Asp Arg Ile Arg Thr Leu Leu Glu Leu Glu Lys Phe Glu
    1415             1420             1425


His Gln Gly Ser Arg Thr Arg Ser Arg Ala Leu Glu Arg Arg Arg
    1430             1435             1440


Arg Arg Gln Lys Val Asp Gln Gly Arg Asn Val Glu Asn Leu Val
    1445             1450             1455


Gln Gln Glu Leu Gln Ser Lys Arg Ala Arg Ser Ser Gly Ile Met
    1460             1465             1470


Ser Gln Val Gly Arg Glu Glu Glu His Tyr Gln Glu Lys Ala Asp
    1475             1480             1485
```

Arg Glu   Asn Met Phe Leu Thr   Pro Ser Thr Asp His   Ser Pro Phe
    1490   1495   1500

Leu Lys   Gly Asn Gln Asn Ser   Leu Gln His Lys Asp   Ser Gly Ser
    1505   1510   1515

Ser Ala   Ala Cys Pro Ser Leu   Met Pro Leu Leu Gln   Leu Ser Tyr
    1520   1525   1530

Ser Asp   Glu Gln Gln Leu
    1535

<210>   2546
<211>   274
<212>   PRT
<213>   Homo sapiens

<400>   2546

Met Gly Val Ser Ala Gln Asp Ile Phe Asn Ala Val Ile Lys Glu His
1   5   10   15

Pro Gly Leu Val Gln Arg Leu Pro Cys Val Trp Asn Val Gln Leu Ser
            20   25   30

Asp His Thr Leu Ala Glu Arg Cys Tyr Ser Glu Ala Ser Asp Leu Lys
        35   40   45

Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn Lys His
    50   55   60

Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr Phe Leu Glu Tyr Asp Gly
65   70   75   80

Asn Leu Leu Arg Arg Glu Leu Phe Val Cys Pro Ser Gln Pro Pro Pro
            85   90   95

Gly Ala Glu Gln Leu Gln Gln Ala Leu Ala Gln Leu Asp Gly Glu Asp
            100   105   110

Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu Thr Val His Arg Val His
        115   120   125

Val Thr Phe Leu Pro His Glu Pro Pro Pro Arg Pro His Asp Val
    130   135   140

Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu Glu Ala
145   150   155   160

Leu Cys Arg His Trp Pro Gly Pro Met Ser Leu Ala Leu Tyr Leu Thr
            165   170   175

Asp Ala Glu Ala Gln Gln Phe Leu His Phe Val Glu Ala Ser Pro Val
            180   185   190

Leu Ala Ala Arg Gln Asp Val Ala Tyr His Val Val Tyr Arg Glu Gly
        195   200   205

Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn Val Ala Leu Ala Gln Ala
    210   215   220

Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile Asp Phe Leu Pro Ala Tyr
225   230   235   240

Ser Leu Tyr Asp Tyr Leu Arg Glu Ala Arg Ala Gly Phe Asn Ser Ser
            245   250   255

Ser Thr Cys Gly Cys Ala His Pro Ser His Gln Ala Arg Trp Pro Met
            260   265   270

Val Val

<210> 2547
<211> 504
<212> PRT
<213> Homo sapiens

<400> 2547

Met Val Ala Pro Gly Ser Val Thr Ser Arg Leu Gly Ser Val Phe Pro
1   5   10   15

Phe Leu Leu Val Leu Val Asp Leu Gln Tyr Glu Gly Ala Glu Cys Gly
            20   25   30

Val Asn Ala Asp Val Glu Lys His Leu Glu Leu Gly Lys Lys Leu Leu
        35   40   45

Ala Ala Gly Gln Leu Ala Asp Ala Leu Ser Gln Phe His Ala Ala Val
    50   55   60

Asp Gly Asp Pro Asp Asn Tyr Ile Ala Tyr Tyr Arg Arg Ala Thr Val
65   70   75   80

926

Phe Leu Ala Met Gly Lys Ser Lys Ala Ala Leu Pro Asp Leu Thr Lys
                85   90   95

Val Ile Gln Leu Lys Met Asp Phe Thr Ala Ala Arg Leu Gln Arg Gly
            100   105   110

His Leu Leu Leu Lys Gln Gly Lys Leu Asp Glu Ala Glu Asp Asp Phe
            115   120   125

Lys Lys Val Leu Lys Ser Asn Pro Ser Glu Asn Glu Glu Lys Glu Ala
    130   135   140

Gln Ser Gln Leu Ile Lys Ser Asp Glu Met Gln Arg Leu Arg Ser Gln
145   150   155   160

Ala Leu Asn Ala Phe Gly Ser Gly Asp Tyr Thr Ala Ala Ile Ala Phe
                165   170   175

Leu Asp Lys Ile Leu Glu Val Cys Val Trp Asp Ala Glu Leu Arg Glu
            180   185   190

Leu Arg Ala Glu Cys Phe Ile Lys Glu Gly Glu Pro Arg Lys Ala Ile
            195   200   205

Ser Asp Leu Lys Ala Ala Ser Lys Leu Lys Asn Asp Asn Thr Glu Ala
    210   215   220

Phe Tyr Lys Ile Ser Thr Leu Tyr Tyr Gln Leu Gly Asp His Glu Leu
225   230   235   240

Ser Leu Ser Glu Val Arg Glu Cys Leu Lys Leu Asp Gln Asp His Lys
                245   250   255

Arg Cys Phe Ala His Tyr Lys Gln Val Lys Lys Leu Asn Lys Leu Ile
            260   265   270

Glu Ser Ala Glu Glu Leu Ile Arg Asp Gly Arg Tyr Thr Asp Ala Thr
    275   280   285

Ser Lys Tyr Glu Ser Val Met Lys Thr Glu Pro Ser Ile Ala Glu Tyr
    290   295   300

Thr Val Arg Ser Lys Glu Arg Ile Cys His Cys Phe Ser Lys Asp Glu
305   310   315   320

Lys Pro Val Glu Ala Ile Arg Val Cys Ser Glu Val Leu Gln Met Glu

```
                    325                     330                     335


Pro Asp Asn Val Asn Ala Leu Lys Asp Arg Ala Glu Ala Tyr Leu Ile
            340                 345                 350


Glu Glu Met Tyr Asp Glu Ala Ile Gln Asp Tyr Glu Thr Ala Gln Glu
            355                 360                 365


His Asn Glu Asn Asp Gln Gln Ile Arg Glu Gly Leu Glu Lys Ala Gln
        370                 375                 380


Arg Leu Leu Lys Gln Ser Gln Lys Arg Asp Tyr Tyr Lys Ile Leu Gly
385                 390                 395                 400


Val Lys Arg Asn Ala Lys Lys Gln Glu Ile Ile Lys Ala Tyr Arg Lys
                405                 410                 415


Leu Ala Leu Gln Trp His Pro Asp Asn Phe Gln Asn Glu Glu Glu Lys
            420                 425                 430


Lys Lys Ala Glu Lys Lys Phe Ile Asp Ile Ala Ala Ala Lys Glu Val
            435                 440                 445


Leu Ser Asp Pro Glu Met Arg Lys Lys Phe Asp Asp Gly Glu Asp Pro
        450                 455                 460


Leu Asp Ala Glu Ser Gln Gln Gly Gly Gly Gly Asn Pro Phe His Arg
465                 470                 475                 480


Ser Trp Asn Ser Trp Gln Gly Phe Asn Pro Phe Ser Ser Gly Gly Pro
                485                 490                 495


Phe Arg Phe Lys Phe His Phe Asn
                500
```

```
<210>    2548
<211>    258
<212>    PRT
<213>    Homo sapiens

<400>    2548

Met Pro Pro Gln Gln Gly Asp Pro Ala Phe Pro Asp Arg Cys Glu Ala
1                   5                   10                  15


Pro Pro Val Pro Pro Arg Arg Glu Arg Gly Gly Arg Gly Gly Arg Gly
            20                  25                  30
```

```
Pro Gly Glu Pro Gly Gly Arg Gly Arg Ala Gly Gly Ala Glu Gly Arg
        35              40              45
```

```
Gly Val Lys Cys Val Leu Val Gly Asp Gly Ala Val Gly Lys Thr Ser
        50              55              60
```

```
Leu Val Val Ser Tyr Thr Thr Asn Gly Tyr Pro Thr Glu Tyr Ile Pro
65              70              75              80
```

```
Thr Ala Phe Asp Asn Phe Ser Ala Val Val Ser Val Asp Gly Arg Pro
                85              90              95
```

```
Val Arg Leu Gln Leu Cys Asp Thr Ala Gly Gln Asp Glu Phe Asp Lys
            100             105             110
```

```
Leu Arg Pro Leu Cys Tyr Thr Asn Thr Asp Ile Phe Leu Leu Cys Phe
            115             120             125
```

```
Ser Val Val Ser Pro Ser Ser Phe Gln Asn Val Ser Glu Lys Trp Val
    130             135             140
```

```
Pro Glu Ile Arg Cys His Cys Pro Lys Ala Pro Ile Ile Leu Val Gly
145             150             155             160
```

```
Thr Gln Ser Asp Leu Arg Glu Asp Val Lys Val Leu Ile Glu Leu Asp
                165             170             175
```

```
Lys Cys Lys Glu Lys Pro Val Pro Glu Glu Ala Ala Lys Leu Cys Ala
            180             185             190
```

```
Glu Glu Ile Lys Ala Ala Ser Tyr Ile Glu Cys Ser Ala Leu Thr Gln
            195             200             205
```

```
Lys Asn Leu Lys Glu Val Phe Asp Ala Ala Ile Val Ala Gly Ile Gln
    210             215             220
```

```
Tyr Ser Asp Thr Gln Gln Gln Pro Lys Lys Ser Lys Ser Arg Thr Pro
225             230             235             240
```

```
Asp Lys Met Lys Asn Leu Ser Lys Ser Trp Trp Lys Lys Tyr Cys Cys
            245             250             255
```

```
Phe Val
```

929

<210> 2549
<211> 394
<212> PRT
<213> Homo sapiens

<400> 2549

```
Met Phe Lys Lys Lys Ser His Val Arg Asn His Leu Arg Thr His Thr
1               5                   10                  15


Gly Glu Arg Pro Phe Pro Cys Pro Asp Cys Ser Lys Pro Phe Asn Ser
            20                  25                  30


Pro Ala Asn Leu Ala Arg His Arg Leu Thr His Thr Gly Glu Arg Pro
            35                  40                  45


Tyr Arg Cys Gly Asp Cys Gly Lys Ala Phe Thr Gln Ser Ser Thr Leu
    50                  55                  60


Arg Gln His Arg Leu Val His Ala Gln His Phe Pro Tyr Arg Cys Gln
65                  70                  75                  80


Glu Cys Gly Val Arg Phe His Arg Pro Tyr Arg Leu Leu Met His Arg
                85                  90                  95


Tyr His His Thr Gly Glu Tyr Pro Tyr Lys Cys Arg Glu Cys Pro Arg
                100                 105                 110


Ser Phe Leu Leu Arg Arg Leu Leu Glu Val His Gln Leu Val Val His
        115                 120                 125


Ala Gly Arg Gln Pro His Arg Cys Pro Ser Cys Gly Ala Ala Phe Pro
        130                 135                 140


Ser Ser Leu Arg Leu Arg Glu His Arg Cys Ala Ala Ala Ala Ala Gln
145                 150                 155                 160


Ala Pro Arg Arg Phe Glu Cys Gly Thr Cys Gly Lys Lys Val Gly Ser
                165                 170                 175


Ala Ala Arg Leu Gln Ala His Glu Ala Ala His Ala Ala Ala Gly Pro
                180                 185                 190


Gly Glu Val Leu Ala Lys Glu Pro Pro Ala Pro Arg Ala Pro Arg Ala
            195                 200                 205


Thr Arg Ala Pro Val Ala Ser Pro Ala Ala Leu Gly Ser Thr Ala Thr
    210                 215                 220
```

Ala Ser Pro Ala Ala Pro Ala Arg Arg Arg Gly Leu Glu Cys Ser Glu
225   230   235   240

Cys Lys Lys Leu Phe Ser Thr Glu Thr Ser Leu Gln Val His Arg Arg
                245   250   255

Ile His Thr Gly Glu Arg Pro Tyr Pro Cys Pro Asp Cys Gly Lys Ala
            260   265   270

Phe Arg Gln Ser Thr His Leu Lys Asp His Arg Arg Leu His Thr Gly
        275   280   285

Glu Arg Pro Phe Ala Cys Glu Val Cys Gly Lys Ala Phe Ala Ile Ser
    290   295   300

Met Arg Leu Ala Glu His Arg Arg Ile His Thr Gly Glu Arg Pro Tyr
305   310   315   320

Ser Cys Pro Asp Cys Gly Lys Ser Tyr Arg Ser Phe Ser Asn Leu Trp
            325   330   335

Lys His Arg Lys Thr His Gln Gln Gln His Gln Ala Ala Val Arg Gln
        340   345   350

Gln Leu Ala Glu Ala Glu Ala Ala Val Gly Leu Ala Val Met Glu Thr
        355   360   365

Ala Val Glu Ala Leu Pro Leu Val Glu Ala Ile Glu Ile Tyr Pro Leu
    370   375   380

Ala Glu Ala Glu Gly Val Gln Ile Ser Gly
385   390

<210>   2550
<211>   415
<212>   PRT
<213>   Homo sapiens

<400>   2550

Met Glu Asp Leu Cys Val Ala Asn Thr Leu Phe Ala Leu Asn Leu Phe
1   5   10   15

Lys His Leu Ala Lys Ala Ser Pro Thr Gln Asn Leu Phe Leu Ser Pro
        20   25   30

Trp Ser Ile Ser Ser Thr Met Ala Met Val Tyr Met Gly Ser Arg Gly
        35   40   45

Ser Thr Glu Asp Gln Met Ala Lys Val Leu Gln Phe Asn Glu Val Gly
    50   55   60

Ala Asn Ala Val Thr Pro Met Thr Pro Glu Asn Phe Thr Ser Cys Gly
65   70   75   80

Phe Met Gln Gln Ile Gln Lys Gly Ser Tyr Pro Asp Ala Ile Leu Gln
            85   90   95

Ala Gln Ala Ala Asp Lys Ile His Ser Ser Phe Arg Ser Leu Ser Ser
        100   105   110

Ala Ile Asn Ala Ser Thr Gly Asn Tyr Leu Leu Glu Ser Val Asn Lys
        115   120   125

Leu Phe Gly Glu Lys Ser Ala Ser Phe Arg Glu Glu Tyr Ile Arg Leu
    130   135   140

Cys Gln Lys Tyr Tyr Ser Ser Glu Pro Gln Ala Val Asp Phe Leu Glu
145   150   155   160

Cys Ala Glu Glu Ala Arg Lys Lys Ile Asn Ser Trp Val Lys Thr Gln
            165   170   175

Thr Lys Gly Lys Ile Pro Asn Leu Leu Pro Glu Gly Ser Val Asp Gly
            180   185   190

Asp Thr Arg Met Val Leu Val Asn Ala Val Tyr Phe Lys Gly Lys Trp
            195   200   205

Lys Thr Pro Phe Glu Lys Lys Leu Asn Gly Leu Tyr Pro Phe Arg Val
    210   215   220

Asn Ser Ala Gln Arg Thr Pro Val Gln Met Met Tyr Leu Arg Glu Lys
225   230   235   240

Leu Asn Ile Gly Tyr Ile Glu Asp Leu Lys Ala Gln Ile Leu Glu Leu
            245   250   255

Pro Tyr Ala Gly Asp Val Ser Met Phe Leu Leu Leu Pro Asp Glu Ile
        260   265   270

Ala Asp Val Ser Thr Gly Leu Glu Leu Leu Glu Ser Glu Ile Thr Tyr

                275   280   285

Asp Lys Leu Asn Lys Trp Thr Ser Lys Asp Lys Met Ala Glu Asp Glu
    290   295   300

Val Glu Val Tyr Ile Pro Gln Phe Lys Leu Glu Glu His Tyr Glu Leu
305   310   315   320

Arg Ser Ile Leu Arg Ser Met Gly Met Glu Asp Ala Phe Asn Lys Gly
            325   330   335

Arg Ala Asn Phe Ser Gly Met Ser Glu Arg Asn Asp Leu Phe Leu Ser
            340   345   350

Glu Val Phe His Gln Ala Met Val Asp Val Asn Glu Glu Gly Thr Glu
        355   360   365

Ala Ala Ala Gly Thr Gly Gly Val Met Thr Gly Arg Thr Gly His Gly
    370   375   380

Gly Pro Gln Phe Val Ala Asp His Pro Phe Leu Phe Leu Ile Met His
385   390   395   400

Lys Ile Thr Asn Cys Ile Leu Phe Phe Gly Arg Phe Ser Ser Pro
            405   410   415

<210> 2551
<211> 434
<212> PRT
<213> Homo sapiens

<400> 2551

Met Ser Ile Leu Lys Ile His Ala Arg Glu Ile Phe Asp Ser Arg Gly
1   5   10   15

Asn Pro Thr Val Glu Val Asp Leu Phe Thr Ser Lys Gly Leu Phe Arg
            20   25   30

Ala Ala Val Pro Ser Gly Ala Ser Thr Gly Ile Tyr Glu Ala Leu Glu
        35   40   45

Leu Arg Asp Asn Asp Lys Thr Arg Tyr Met Gly Lys Gly Val Ser Lys
    50   55   60

Ala Val Glu His Ile Asn Lys Thr Ile Ala Pro Ala Leu Val Ser Lys
65   70   75   80

Lys Leu Asn Val Thr Glu Gln Glu Lys Ile Asp Lys Leu Met Ile Glu
                85   90   95

Met Asp Gly Thr Glu Asn Lys Ser Lys Phe Gly Ala Asn Ala Ile Leu
                100   105   110

Gly Val Ser Leu Ala Val Cys Lys Ala Gly Ala Val Glu Lys Gly Val
                115   120   125

Pro Leu Tyr Arg His Ile Ala Asp Leu Ala Gly Asn Ser Glu Val Ile
    130   135   140

Leu Pro Val Pro Ala Phe Asn Val Ile Asn Gly Gly Ser His Ala Gly
145   150   155   160

Asn Lys Leu Ala Met Gln Glu Phe Met Ile Leu Pro Val Gly Ala Ala
                165   170   175

Asn Phe Arg Glu Ala Met Arg Ile Gly Ala Glu Val Tyr His Asn Leu
                180   185   190

Lys Asn Val Ile Lys Glu Lys Tyr Gly Lys Asp Ala Thr Asn Val Gly
                195   200   205

Asp Glu Gly Gly Phe Ala Pro Asn Ile Leu Glu Asn Lys Glu Gly Leu
    210   215   220

Glu Leu Leu Lys Thr Ala Ile Gly Lys Ala Gly Tyr Thr Asp Lys Val
225   230   235   240

Val Ile Gly Met Asp Val Ala Ala Ser Glu Phe Phe Arg Ser Gly Lys
                245   250   255

Tyr Asp Leu Asp Phe Lys Ser Pro Asp Asp Pro Ser Arg Tyr Ile Ser
                260   265   270

Pro Asp Gln Leu Ala Asp Leu Tyr Lys Ser Phe Ile Lys Asp Tyr Pro
                275   280   285

Val Val Ser Ile Glu Asp Pro Phe Asp Gln Asp Asp Trp Gly Ala Trp
    290   295   300

Gln Lys Phe Thr Ala Ser Ala Gly Ile Gln Val Val Gly Asp Asp Leu
305   310   315   320

Thr Val Thr Asn Pro Lys Arg Ile Ala Lys Ala Val Asn Glu Lys Ser
                325   330   335

Cys Asn Cys Leu Leu Leu Lys Val Asn Gln Ile Gly Ser Val Thr Glu
            340   345   350

Ser Leu Gln Ala Cys Lys Leu Ala Gln Ala Asn Gly Trp Gly Val Met
            355   360   365

Val Ser His Arg Ser Gly Glu Thr Glu Asp Thr Phe Ile Ala Asp Leu
        370   375   380

Val Val Gly Leu Cys Thr Gly Gln Ile Lys Thr Gly Ala Pro Cys Arg
385   390   395   400

Ser Glu Arg Leu Ala Lys Tyr Asn Gln Leu Leu Arg Ile Glu Glu Glu
            405   410   415

Leu Gly Ser Lys Ala Lys Phe Ala Gly Arg Asn Phe Arg Asn Pro Leu
            420   425   430

Ala Lys

<210> 2552
<211> 281
<212> PRT
<213> Homo sapiens

<400> 2552

Met Glu Val His Gln Gln Asn Ala Leu Phe Gln Tyr Phe Ala Asp Thr
1   5   10   15

Leu Thr Ala Val Val Gln Asn Ala Lys Lys Asn Gly Arg Tyr Asp Met
            20   25   30

Gly Ile Leu Asp Leu Gly Ser Gly Asp Glu Lys Val Arg Lys Ser Asp
        35   40   45

Val Lys Lys Phe Leu Thr Pro Gly Tyr Ser Thr Ser Gly His Val Glu
        50   55   60

Leu Tyr Thr Ile Ser Val Glu Arg Gly Met Ser Trp Glu Glu Ala Thr
65   70   75   80

Lys Ile Trp Ala Glu Leu Thr Gly Pro Asp Asp Gly Phe Tyr Leu Ser
            85   90   95

935

```
Leu Gln Ile Arg Asn Asn Lys Lys Thr Ala Ile Leu Val Lys Glu Val
        100                 105                 110


Asn Pro Lys Lys Lys Leu Phe Leu Val Tyr Arg Pro Asn Thr Gly Lys
        115                 120                 125


Gln Leu Lys Leu Glu Ile Tyr Ala Asp Leu Lys Lys Lys Tyr Lys Lys
    130                 135                 140


Val Val Ser Asp Asp Ala Leu Met His Trp Leu Asp Gln Tyr Asn Ser
145                 150                 155                 160


Ser Ala Asp Thr Cys Thr His Ala Tyr Trp Arg Gly Asn Cys Lys Lys
                165                 170                 175


Ala Ser Leu Gly Leu Val Cys Glu Ile Gly Leu Arg Cys Arg Thr Tyr
            180                 185                 190


Tyr Val Leu Cys Gly Ser Val Leu Ser Val Trp Thr Lys Val Glu Gly
        195                 200                 205


Val Leu Ala Ser Val Ser Gly Thr Asn Val Lys Met Gln Ile Val Arg
    210                 215                 220


Leu Arg Thr Glu Asp Gly Gln Arg Ile Val Gly Leu Ile Ile Pro Ala
225                 230                 235                 240


Asn Cys Val Ser Pro Leu Val Asn Leu Leu Ser Thr Ser Asp Gln Ser
                245                 250                 255


Gln Gln Leu Ala Val Gln Gln Lys Gln Leu Trp Gln Gln His His Pro
            260                 265                 270


Gln Ser Ile Thr Asn Leu Ser Asn Ala
        275                 280


<210>   2553
<211>   176
<212>   PRT
<213>   Homo sapiens

<400>   2553

Met Lys Ala Ser Gly Thr Leu Arg Glu Tyr Lys Val Val Gly Arg Cys
1               5                   10                  15
```

Leu Pro Thr Pro Lys Cys His Thr Pro Pro Leu Tyr Arg Met Arg Ile
            20   25   30

Phe Ala Pro Asn His Val Val Ala Lys Ser Arg Phe Trp Tyr Phe Val
            35   40   45

Ser Gln Leu Lys Lys Met Lys Lys Ser Ser Gly Glu Ile Val Tyr Cys
    50   55   60

Gly Gln Val Phe Glu Lys Ser Pro Leu Arg Val Lys Asn Phe Gly Ile
65   70   75   80

Trp Leu Arg Tyr Asp Ser Arg Ser Gly Thr His Asn Met Tyr Arg Glu
                85   90   95

Tyr Arg Asp Leu Thr Thr Ala Gly Ala Val Thr Gln Cys Tyr Arg Asp
            100   105   110

Met Gly Ala Arg His Arg Ala Arg Ala His Ser Ile Gln Ile Met Lys
        115   120   125

Val Glu Glu Ile Ala Ala Ser Lys Cys Arg Arg Pro Ala Val Lys Gln
    130   135   140

Phe His Asp Ser Lys Ile Lys Phe Pro Leu Pro His Arg Val Leu Arg
145   150   155   160

Arg Gln His Lys Pro Arg Phe Thr Thr Lys Arg Pro Asn Thr Phe Phe
                165   170   175

<210>   2554
<211>   363
<212>   PRT
<213>   Homo sapiens

<400>   2554

Met Ala Leu His Cys Gln Glu Phe Gly Gly Lys Asn Tyr Glu Ala Ser
1   5   10   15

Met Ser His Val Asp Lys Phe Val Lys Glu Leu Leu Ser Ser Asp Ala
            20   25   30

Met Lys Glu Tyr Asn Arg Ala Arg Val Tyr Leu Asp Glu Asn Tyr Lys
        35   40   45

Ser Gln Glu His Phe Thr Ala Leu Gly Ser Phe Tyr Phe Leu His Glu
    50   55   60

937

Ser Leu Lys Asn Ile Tyr Gln Phe Asp Phe Lys Ala Lys Lys Tyr Arg
65   70   75   80

Lys Val Ala Gly Lys Glu Ile Tyr Ser Asp Thr Leu Glu Ser Thr Pro
                85   90   95

Met Leu Glu Lys Glu Lys Phe Arg Arg Leu Leu Pro Arg Val Gln Met
            100   105   110

Val Lys Lys Arg Leu His Pro Asp Glu Val Val Ile Ala Asp Cys Ala
        115   120   125

Phe Asp Leu Val Asn Ile His Leu Phe His Asp Ala Ser Asn Leu Val
    130   135   140

Ala Trp Glu Thr Ser Pro Ser Val Tyr Ser Gly Ile Arg His Lys Ala
145   150   155   160

Leu Gly Tyr Val Leu Asp Arg Ile Ile Asp Gln Arg Phe Glu Lys Val
            165   170   175

Ser Tyr Phe Val Phe Gly Asp Phe Asn Phe Arg Leu Asp Ser Lys Ser
        180   185   190

Val Val Glu Thr Leu Ser Ala Lys Pro Pro Met Gln Thr Val Arg Ala
        195   200   205

Ala Asp Thr Asn Glu Val Val Lys Leu Ile Phe Arg Glu Ser Asp Asn
    210   215   220

Asp Arg Lys Val Met Leu Gln Leu Glu`Lys Lys Leu Phe Asp Tyr Phe
225   230   235   240

Asn Gln Glu Val Phe Arg Asp Asn Asn Gly Thr Ala Leu Leu Glu Phe
                245   250   255

Asp Lys Glu Leu Ser Val Phe Lys Asp Arg Leu Tyr Glu Leu Asp Ile
            260   265   270

Ser Phe Pro Pro Ser Tyr Pro Tyr Ser Glu Asp Ala Arg Gln Gly Glu
        275   280   285

Gln Tyr Met Asn Thr Arg Cys Pro Ala Trp Cys Asp Arg Ile Leu Met
    290   295   300

938

```
Ser Pro Ser Ala Lys Glu Leu Val Leu Arg Ser Glu Ser Glu Glu Lys
305             310             315             320


Val Val Thr Tyr Asp His Ile Gly Pro Asn Val Cys Met Gly Asp His
                325             330             335


Lys Pro Val Phe Leu Ala Phe Arg Ile Met Pro Gly Ala Gly Lys Pro
            340             345             350


His Ala His Val His Lys Cys Cys Val Val Gln
            355             360
```

```
<210>  2555
<211>  56
<212>  PRT
<213>  Homo sapiens

<400>  2555
```

```
Met Gly His Gln Gln Leu Tyr Trp Ser His Pro Arg Lys Phe Gly Gln
1               5               10              15


Gly Ser Arg Ser Cys Arg Val Cys Ser Asn Arg His Gly Leu Ile Arg
            20              25              30


Lys Tyr Gly Leu Asn Met Cys Arg Gln Cys Phe Arg Gln Tyr Ala Lys
            35              40              45


Asp Ile Gly Phe Ile Lys Leu Asp
    50              55
```

```
<210>  2556
<211>  520
<212>  PRT
<213>  Homo sapiens

<400>  2556
```

```
Met Val Thr Ser Ser Phe Pro Ile Ser Val Ala Val Phe Ala Leu Ile
1               5               10              15


Thr Leu Gln Val Gly Thr Gln Asp Ser Phe Ile Ala Ala Val Tyr Glu
            20              25              30


His Ala Val Ile Leu Pro Asn Lys Thr Glu Thr Pro Val Ser Gln Glu
            35              40              45


Asp Ala Leu Asn Leu Met Asn Glu Asn Ile Asp Ile Leu Glu Thr Ala
    50              55              60
```

```
Ile Lys Gln Ala Ala Glu Gln Gly Ala Arg Ile Ile Val Thr Pro Glu
65                70                75                80

Asp Ala Leu Tyr Gly Trp Lys Phe Thr Arg Glu Thr Val Phe Pro Tyr
                85                90                95

Leu Glu Asp Ile Pro Asp Pro Gln Val Asn Trp Ile Pro Cys Gln Asp
            100             105             110

Pro His Arg Phe Gly His Thr Pro Val Gln Ala Arg Leu Ser Cys Leu
            115             120             125

Ala Lys Asp Asn Ser Ile Tyr Val Leu Ala Asn Leu Gly Asp Lys Lys
    130             135             140

Pro Cys Asn Ser Arg Asp Ser Thr Cys Pro Pro Asn Gly Tyr Phe Gln
145             150             155             160

Tyr Asn Thr Asn Val Val Tyr Asn Thr Glu Gly Lys Leu Val Ala Arg
                165             170             175

Tyr His Lys Tyr His Leu Tyr Ser Glu Pro Gln Phe Asn Val Pro Glu
            180             185             190

Lys Pro Glu Leu Val Thr Phe Asn Thr Ala Phe Gly Arg Phe Gly Ile
            195             200             205

Phe Thr Cys Phe Asp Ile Phe Phe Tyr Asp Pro Gly Val Thr Leu Val
    210             215             220

Lys Asp Phe His Val Asp Thr Ile Leu Phe Pro Thr Ala Trp Met Asn
225             230             235             240

Val Leu Pro Leu Leu Thr Ala Ile Glu Phe His Ser Ala Trp Ala Met
            245             250             255

Gly Met Gly Val Asn Leu Leu Val Ala Asn Thr His His Val Ser Leu
            260             265             270

Asn Met Thr Gly Ser Gly Ile Tyr Ala Pro Asn Gly Pro Lys Val Tyr
    275             280             285

His Tyr Asp Met Lys Thr Glu Leu Gly Lys Leu Leu Leu Ser Glu Val
    290             295             300
```

940

Asp Ser His Pro Leu Ser Ser Leu Ala Tyr Pro Thr Ala Val Asn Trp
305   310   315   320

Asn Ala Tyr Ala Thr Thr Ile Lys Pro Phe Pro Val Gln Lys Asn Thr
                325   330   335

Phe Arg Gly Phe Ile Ser Arg Asp Gly Phe Asn Phe Thr Glu Leu Phe
            340   345   350

Glu Asn Ala Gly Asn Leu Thr Val Cys Gln Lys Glu Leu Cys Cys His
    355   360   365

Leu Ser Tyr Arg Met Leu Gln Lys Glu Glu Asn Glu Val Tyr Val Leu
    370   375   380

Gly Ala Phe Thr Gly Leu His Gly Arg Arg Arg Glu Tyr Trp Gln Gln
385   390   395   400

Val Cys Thr Met Leu Lys Cys Lys Thr Thr Asn Leu Thr Thr Cys Gly
            405   410   415

Arg Pro Val Glu Thr Ala Ser Thr Arg Phe Glu Met Phe Ser Leu Ser
            420   425   430

Gly Thr Phe Gly Thr Glu Tyr Val Phe Pro Glu Val Leu Leu Thr Glu
        435   440   445

Ile His Leu Ser Pro Gly Lys Phe Glu Val Leu Lys Asp Gly Arg Leu
    450   455   460

Val Asn Lys Asn Gly Ser Ser Gly Pro Ile Leu Thr Val Ser Leu Phe
465   470   475   480

Gly Arg Trp Tyr Thr Lys Asp Ser Leu Tyr Ser Ser Cys Gly Thr Ser
            485   490   495

Asn Ser Ala Ile Thr Tyr Leu Leu Ile Phe Ile Leu Leu Met Ile Ile
        500   505   510

Ala Leu Gln Asn Ile Val Met Leu
    515   520

<210> 2557
<211> 564
<212> PRT
<213> Homo sapiens

941

<400> 2557

Met Ser Ala Gly Ser Ala Thr His Pro Gly Ala Gly Gly Arg Arg Ser
1   5   10   15

Lys Trp Asp Gln Pro Ala Pro Ala Pro Leu Leu Phe Leu Pro Pro Ala
            20   25   30

Ala Pro Gly Gly Glu Val Thr Ser Ser Gly Gly Ser Pro Gly Gly Thr
        35   40   45

Thr Ala Ala Pro Ser Gly Ala Leu Asp Ala Ala Ala Ala Val Ala Ala
    50   55   60

Lys Ile Asn Ala Met Leu Met Ala Lys Gly Lys Leu Lys Pro Thr Gln
65   70   75   80

Asn Ala Ser Glu Lys Leu Gln Ala Pro Gly Lys Gly Leu Thr Ser Asn
                85   90   95

Lys Ser Lys Asp Asp Leu Val Val Ala Glu Val Glu Ile Asn Asp Val
            100   105   110

Pro Leu Thr Cys Arg Asn Leu Leu Thr Arg Gly Gln Thr Gln Asp Glu
        115   120   125

Ile Ser Arg Leu Ser Gly Ala Ala Val Ser Thr Arg Gly Arg Phe Met
    130   135   140

Thr Thr Glu Glu Lys Ala Lys Val Gly Pro Gly Asp Arg Pro Leu Tyr
145   150   155   160

Leu His Val Gln Gly Gln Thr Arg Glu Leu Val Asp Arg Ala Val Asn
                165   170   175

Arg Ile Lys Glu Ile Ile Thr Asn Gly Val Val Lys Ala Ala Thr Gly
            180   185   190

Thr Ser Pro Thr Phe Asn Gly Ala Thr Val Thr Val Tyr His Gln Pro
        195   200   205

Ala Pro Ile Ala Gln Leu Ser Pro Ala Val Ser Gln Lys Pro Pro Phe
    210   215   220

Gln Ser Gly Met His Tyr Val Gln Asp Lys Leu Phe Val Gly Leu Glu
225   230   235   240

942

```
His Ala Val Pro Thr Phe Asn Val Lys Glu Lys Val Glu Gly Pro Gly
              245                 250                 255

Cys Ser Tyr Leu Gln His Ile Gln Ile Glu Thr Gly Ala Lys Val Phe
              260                 265                 270

Leu Arg Gly Lys Gly Ser Gly Cys Ile Glu Pro Ala Ser Gly Arg Glu
              275                 280                 285

Ala Phe Glu Pro Met Tyr Ile Tyr Ile Ser His Pro Lys Pro Glu Gly
              290                 295                 300

Leu Ala Ala Ala Lys Lys Leu Cys Glu Asn Leu Leu Gln Thr Val His
305                 310                 315                 320

Ala Glu Tyr Ser Arg Phe Val Asn Gln Ile Asn Thr Ala Val Pro Leu
              325                 330                 335

Pro Gly Tyr Thr Gln Pro Ser Ala Ile Ser Ser Val Pro Pro Gln Pro
              340                 345                 350

Pro Tyr Tyr Pro Ser Asn Gly Tyr Gln Ser Gly Tyr Pro Val Val Pro
              355                 360                 365

Pro Pro Gln Gln Pro Val Gln Pro Pro Tyr Gly Val Pro Ser Ile Val
              370                 375                 380

Pro Pro Ala Val Ser Leu Ala Pro Gly Val Leu Pro Ala Leu Pro Thr
385                 390                 395                 400

Gly Val Pro Pro Val Pro Thr Gln Tyr Pro Ile Thr Gln Val Gln Pro
              405                 410                 415

Pro Ala Ser Thr Gly Gln Ser Pro Met Gly Gly Pro Phe Ile Pro Ala
              420                 425                 430

Ala Pro Val Lys Thr Ala Leu Pro Ala Gly Pro Gln Pro Gln Pro Gln
              435                 440                 445

Pro Gln Pro Pro Leu Pro Ser Gln Pro Gln Ala Gln Lys Arg Arg Phe
              450                 455                 460

Thr Glu Glu Leu Pro Asp Glu Arg Glu Ser Gly Leu Leu Gly Tyr Gln
465                 470                 475                 480
```

943

```
His Gly Pro Ile His Met Thr Asn Leu Gly Thr Gly Phe Ser Ser Gln
            485                 490                 495


Asn Glu Ile Glu Gly Ala Gly Ser Lys Pro Ala Ser Ser Ser Gly Lys
            500                 505                 510


Glu Arg Glu Arg Asp Arg Gln Leu Met Pro Pro Pro Ala Phe Pro Val
            515                 520                 525


Thr Gly Ile Lys Thr Glu Ser Asp Glu Arg Asn Gly Ser Gly Thr Leu
        530                 535                 540


Thr Gly Ser His Gly Glu Cys Asp Ile Ala Gly Gly Thr Gly Glu Trp
545                 550                 555                 560


Leu Arg Leu Val
```

```
<210>   2558
<211>   462
<212>   PRT
<213>   Homo sapiens

<400>   2558
```

```
Met Gly Lys Glu Lys Thr His Ile Asn Ile Val Val Ile Gly His Val
1               5                   10                  15


Asp Ser Gly Lys Ser Thr Thr Thr Gly His Leu Ile Tyr Lys Cys Gly
            20                  25                  30


Gly Ile Asp Lys Arg Thr Ile Glu Lys Phe Glu Lys Glu Ala Ala Glu
        35                  40                  45


Met Gly Lys Gly Ser Phe Lys Tyr Ala Trp Val Leu Asp Lys Leu Lys
        50                  55                  60


Ala Glu Arg Glu Arg Gly Ile Thr Ile Asp Ile Ser Leu Trp Lys Phe
65                  70                  75                  80


Glu Thr Ser Lys Tyr Tyr Val Thr Ile Ile Asp Ala Pro Gly His Arg
                85                  90                  95


Asp Phe Ile Lys Asn Met Ile Thr Gly Thr Ser Gln Ala Asp Cys Ala
            100                 105                 110


Val Leu Ile Val Ala Ala Gly Val Gly Glu Phe Glu Ala Gly Ile Ser
```

944

```
                    115                        120                        125

    Lys Asn Gly Gln Thr Arg Glu His Ala Leu Leu Ala Tyr Thr Leu Gly
        130                        135                    140

    Val Lys Gln Leu Ile Val Gly Val Asn Lys Met Asp Ser Thr Glu Pro
    145                        150                    155                    160

    Pro Tyr Ser Gln Lys Arg Tyr Glu Glu Ile Val Lys Glu Val Ser Thr
                    165                        170                    175

    Tyr Ile Lys Lys Ile Gly Tyr Asn Pro Asp Thr Val Ala Phe Val Pro
                    180                        185                    190

    Ile Ser Gly Trp Asn Gly Asp Asn Met Leu Glu Pro Ser Ala Asn Met
                    195                        200                    205

    Pro Trp Phe Lys Gly Trp Lys Val Thr Arg Lys Asp Gly Asn Ala Ser
        210                        215                    220

    Gly Thr Thr Leu Leu Glu Ala Leu Asp Cys Ile Leu Pro Pro Thr Arg
    225                        230                    235                    240

    Pro Thr Asp Lys Pro Leu Arg Leu Pro Leu Gln Asp Val Tyr Lys Ile
                    245                        250                    255

    Gly Gly Ile Gly Thr Val Pro Val Gly Arg Val Glu Thr Gly Val Leu
                    260                        265                    270

    Lys Pro Gly Met Val Val Thr Phe Ala Pro Val Asn Val Thr Thr Glu
        275                        280                    285

    Val Lys Ser Val Glu Met His His Glu Ala Leu Ser Glu Ala Leu Pro
    290                        295                    300

    Gly Asp Asn Val Gly Phe Asn Val Lys Asn Val Ser Val Lys Asp Val
    305                        310                    315                    320

    Arg Arg Gly Asn Val Ala Gly Asp Ser Lys Asn Asp Pro Pro Met Glu
                    325                        330                    335

    Ala Ala Gly Phe Thr Ala Gln Val Ile Ile Leu Asn His Pro Gly Gln
                    340                        345                    350

    Ile Ser Ala Gly Tyr Ala Pro Val Leu Asp Cys His Thr Ala His Ile
                    355                        360                    365
```

945

```
Ala Cys Lys Phe Ala Glu Leu Lys Glu Lys Ile Asp Arg Arg Ser Gly
    370               375               380

Lys Lys Leu Glu Asp Gly Pro Lys Phe Leu Lys Ser Gly Asp Ala Ala
385               390               395               400

Ile Val Asp Met Val Pro Gly Lys Pro Met Cys Val Glu Ser Phe Ser
                405               410               415

Asp Tyr Pro Pro Leu Gly Arg Phe Ala Val Arg Asp Met Arg Gln Thr
        420               425               430

Val Ala Val Gly Val Ile Lys Ala Val Asp Lys Lys Ala Ala Gly Ala
        435               440               445

Gly Lys Val Thr Lys Ser Ala Gln Lys Ala Gln Lys Ala Lys
    450               455               460
```

```
<210>  2559
<211>  394
<212>  PRT
<213>  Homo sapiens

<400>  2559
```

```
Met Ser Gly Glu Asp Glu Gln Gln Glu Gln Thr Ile Ala Glu Asp Leu
1               5               10               15

Val Val Thr Lys Tyr Lys Met Gly Gly Asp Ile Ala Asn Arg Val Leu
        20               25               30

Arg Ser Leu Val Glu Ala Ser Ser Ser Gly Val Ser Val Leu Ser Leu
        35               40               45

Cys Glu Lys Gly Asp Ala Met Ile Met Glu Glu Thr Gly Lys Ile Phe
    50               55               60

Lys Lys Glu Lys Glu Met Lys Lys Gly Ile Ala Phe Pro Thr Ser Ile
65               70               75               80

Ser Val Asn Asn Cys Val Cys His Phe Ser Pro Leu Lys Ser Asp Gln
                85               90               95

Asp Tyr Ile Leu Lys Glu Gly Asp Leu Val Lys Ile Asp Leu Gly Val
        100               105               110
```

His Val Asp Gly Phe Ile Ala Asn Val Ala His Thr Phe Val Val Asp
        115   120   125

Val Ala Gln Gly Thr Gln Val Thr Gly Arg Lys Ala Asp Val Ile Lys
        130   135   140

Ala Ala His Leu Cys Ala Glu Ala Ala Leu Arg Leu Val Lys Pro Gly
145   150   155   160

Asn Gln Asn Thr Gln Val Thr Glu Ala Trp Asn Lys Val Ala His Ser
                165   170   175

Phe Asn Cys Thr Pro Ile Glu Gly Met Leu Ser His Gln Leu Lys Gln
            180   185   190

His Val Ile Asp Gly Glu Lys Thr Ile Ile Gln Asn Pro Thr Asp Gln
            195   200   205

Gln Lys Lys Asp His Glu Lys Ala Glu Phe Glu Val His Glu Val Tyr
    210   215   220

Ala Val Asp Val Leu Val Ser Ser Gly Glu Gly Lys Ala Lys Asp Ala
225   230   235   240

Gly Gln Arg Thr Thr Ile Tyr Lys Arg Asp Pro Ser Lys Gln Tyr Gly
                245   250   255

Leu Lys Met Lys Thr Ser Arg Ala Phe Phe Ser Glu Val Glu Arg Arg
            260   265   270

Phe Asp Ala Met Pro Phe Thr Leu Arg Ala Phe Glu Asp Glu Lys Lys
        275   280   285

Ala Arg Met Gly Val Val Glu Cys Ala Lys His Glu Leu Leu Gln Pro
    290   295   300

Phe Asn Val Leu Tyr Glu Lys Glu Gly Glu Phe Val Ala Gln Phe Lys
305   310   315   320

Phe Thr Val Leu Leu Met Pro Asn Gly Pro Met Arg Ile Thr Ser Gly
            325   330   335

Pro Phe Glu Pro Asp Leu Tyr Lys Ser Glu Met Glu Val Gln Asp Ala
            340   345   350

Glu Leu Lys Ala Leu Leu Gln Ser Ser Ala Ser Arg Lys Thr Gln Lys

                    355   360   365

Lys Lys Lys Lys Lys Ala Ser Lys Thr Ala Glu Asn Pro Thr Ser Gly
        370   375   380

Glu Thr Leu Glu Glu Asn Glu Ala Gly Asp
385   390

<210>   2560
<211>   335
<212>   PRT
<213>   Homo sapiens

<400>   2560

Met Gly Lys Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg
1   5   10   15

Leu Val Thr Arg Ala Ala Phe Asn Ser Gly Lys Val Asp Ile Val Ala
            20   25   30

Ile Asn Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln
            35   40   45

Tyr Asp Ser Thr His Gly Lys Phe His Gly Thr Val Lys Ala Glu Asn
        50   55   60

Gly Lys Leu Val Ile Asn Gly Asn Pro Ile Thr Ile Phe Gln Glu Arg
65   70   75   80

Asp Pro Ser Lys Ile Lys Trp Gly Asp Ala Gly Ala Glu Tyr Val Val
                85   90   95

Glu Ser Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu
            100   105   110

Gln Gly Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala
        115   120   125

Pro Met Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu
        130   135   140

Lys Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu
145   150   155   160

Ala Lys Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr
                165   170   175

```
Thr Val His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser
        180              185              190


Gly Lys Leu Trp Arg Asp Gly Arg Gly Ala Leu Gln Asn Ile Ile Pro
        195              200              205


Ala Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu
    210              215              220


Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Ala Asn Val
225              230              235              240


Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp
            245              250              255


Asp Ile Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly
        260              265              270


Ile Leu Gly Tyr Thr Glu His Gln Val Val Ser Ser Asp Phe Asn Ser
        275              280              285


Asp Thr His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn
    290              295              300


Asp His Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Phe Gly Tyr
305              310              315              320


Ser Asn Arg Val Val Asp Leu Met Ala His Met Ala Ser Lys Glu
            325              330              335
```

```
<210>  2561
<211>  1912
<212>  PRT
<213>  Homo sapiens

<400>  2561
```

```
Met Ala Ser Gly Leu Gly Ser Pro Ser Pro Cys Ser Ala Gly Ser Glu
1            5              10              15


Glu Glu Asp Met Asp Ala Leu Leu Asn Asn Ser Leu Pro Pro Pro His
        20              25              30


Pro Glu Asn Glu Glu Asp Pro Glu Glu Asp Leu Ser Glu Thr Glu Thr
        35              40              45


Pro Lys Leu Lys Lys Lys Lys Lys Pro Lys Lys Pro Arg Asp Pro Lys
```

```
        50                    55                    60
```

```
Ile Pro Lys Ser Lys Arg Gln Lys Lys Glu Arg Met Leu Leu Cys Arg
65                    70                    75                    80
```

```
Gln Leu Gly Asp Ser Ser Gly Glu Gly Pro Glu Phe Val Glu Glu Glu
                 85                    90                    95
```

```
Glu Glu Val Ala Leu Arg Ser Asp Ser Glu Gly Ser Asp Tyr Thr Pro
             100                   105                   110
```

```
Gly Lys Lys Lys Lys Lys Leu Gly Pro Lys Lys Glu Lys Lys Ser
             115                   120                   125
```

```
Lys Ser Lys Arg Lys Glu Glu Glu Glu Glu Asp Asp Asp Asp Asp
         130                   135                   140
```

```
Ser Lys Glu Pro Lys Ser Ser Ala Gln Leu Leu Glu Asp Trp Gly Met
145                   150                   155                   160
```

```
Glu Asp Ile Asp His Val Phe Ser Glu Glu Asp Tyr Arg Thr Leu Thr
                 165                   170                   175
```

```
Asn Tyr Lys Ala Phe Ser Gln Phe Val Arg Pro Leu Ile Ala Ala Lys
             180                   185                   190
```

```
Asn Pro Lys Ile Ala Val Ser Lys Met Met Met Val Leu Gly Ala Lys
         195                   200                   205
```

```
Trp Arg Glu Phe Ser Thr Asn Asn Pro Phe Lys Gly Ser Ser Gly Ala
    210                   215                   220
```

```
Ser Val Ala Ala Ala Ala Ala Ala Val Ala Val Val Glu Ser Met
225                   230                   235                   240
```

```
Val Thr Ala Thr Glu Val Ala Pro Pro Pro Pro Val Glu Val Pro
             245                   250                   255
```

```
Ile Arg Lys Ala Lys Thr Lys Glu Gly Lys Gly Pro Asn Ala Arg Arg
             260                   265                   270
```

```
Lys Pro Lys Gly Ser Pro Arg Val Pro Asp Ala Lys Lys Pro Lys Pro
             275                   280                   285
```

```
Lys Lys Val Ala Pro Leu Lys Ile Lys Leu Gly Gly Phe Gly Ser Lys
         290                   295                   300
```

Arg Lys Arg Ser Ser Ser Glu Asp Asp Asp Leu Asp Val Glu Ser Asp
305   310   315   320

Phe Asp Asp Ala Ser Ile Asn Ser Tyr Ser Val Ser Asp Gly Ser Thr
              325   330   335

Ser Arg Ser Ser Arg Ser Arg Lys Lys Leu Arg Thr Thr Lys Lys Lys
              340   345   350

Lys Lys Gly Glu Glu Glu Val Thr Ala Val Asp Gly Tyr Glu Thr Asp
          355   360   365

His Gln Asp Tyr Cys Glu Val Cys Gln Gln Gly Gly Glu Ile Ile Leu
      370   375   380

Cys Asp Thr Cys Pro Arg Ala Tyr His Met Val Cys Leu Asp Pro Asp
385   390   395   400

Met Glu Lys Ala Pro Glu Gly Lys Trp Ser Cys Pro His Cys Glu Lys
              405   410   415

Glu Gly Ile Gln Trp Glu Ala Lys Glu Asp Asn Ser Glu Gly Glu Glu
          420   425   430

Ile Leu Glu Glu Val Gly Gly Asp Leu Glu Glu Glu Asp Asp His His
      435   440   445

Met Glu Phe Cys Arg Val Cys Lys Asp Gly Gly Glu Leu Leu Cys Cys
      450   455   460

Asp Thr Cys Pro Ser Ser Tyr His Ile His Cys Leu Asn Pro Pro Leu
465   470   475   480

Pro Glu Ile Pro Asn Gly Glu Trp Leu Cys Pro Arg Cys Thr Cys Pro
              485   490   495

Ala Leu Lys Gly Lys Val Gln Lys Ile Leu Ile Trp Lys Trp Gly Gln
              500   505   510

Pro Pro Ser Pro Thr Pro Val Pro Arg Pro Pro Asp Ala Asp Pro Asn
          515   520   525

Thr Pro Ser Pro Lys Pro Leu Glu Gly Arg Pro Glu Arg Gln Phe Phe
      530   535   540

951

Val Lys Trp Gln Gly Met Ser Tyr Trp His Cys Ser Trp Val Ser Glu
545   550   555   560

Leu Gln Leu Glu Leu His Cys Gln Val Met Phe Arg Asn Tyr Gln Arg
                565   570   575

Lys Asn Asp Met Asp Glu Pro Pro Ser Gly Asp Phe Gly Gly Asp Glu
            580   585   590

Glu Lys Ser Arg Lys Arg Lys Asn Lys Asp Pro Lys Phe Ala Glu Met
        595   600   605

Glu Glu Arg Phe Tyr Arg Tyr Gly Ile Lys Pro Glu Trp Met Met Ile
    610   615   620

His Arg Ile Leu Asn His Ser Val Asp Lys Lys Gly His Val His Tyr
625   630   635   640

Leu Ile Lys Trp Arg Asp Leu Pro Tyr Asp Gln Ala Ser Trp Glu Ser
                645   650   655

Glu Asp Val Glu Ile Gln Asp Tyr Asp Leu Phe Lys Gln Ser Tyr Trp
                660   665   670

Asn His Arg Glu Leu Met Arg Gly Glu Glu Gly Arg Pro Gly Lys Lys
        675   680   685

Leu Lys Lys Val Lys Leu Arg Lys Leu Glu Arg Pro Pro Glu Thr Pro
    690   695   700

Thr Val Asp Pro Thr Val Lys Tyr Glu Arg Gln Pro Glu Tyr Leu Asp
705   710   715   720

Ala Thr Gly Gly Thr Leu His Pro Tyr Gln Met Glu Gly Leu Asn Trp
                725   730   735

Leu Arg Phe Ser Trp Ala Gln Gly Thr Asp Thr Ile Leu Ala Asp Glu
            740   745   750

Met Gly Leu Gly Lys Thr Val Gln Thr Ala Val Phe Leu Tyr Ser Leu
        755   760   765

Tyr Lys Glu Gly His Ser Lys Gly Pro Phe Leu Val Ser Ala Pro Leu
    770   775   780

Ser Thr Ile Ile Asn Trp Glu Arg Glu Phe Glu Met Trp Ala Pro Asp
785   790   795   800

Met Tyr Val Val Thr Tyr Val Gly Asp Lys Asp Ser Arg Ala Ile Ile
                805   810   815

Arg Glu Asn Glu Phe Ser Phe Glu Asp Asn Ala Ile Arg Gly Gly Lys
            820   825   830

Lys Ala Ser Arg Met Lys Lys Glu Ala Ser Val Lys Phe His Val Leu
            835   840   845

Leu Thr Ser Tyr Glu Leu Ile Thr Ile Asp Met Ala Ile Leu Gly Ser
    850   855   860

Ile Asp Trp Ala Cys Leu Ile Val Asp Glu Ala His Arg Leu Lys Asn
865   870   875   880

Asn Gln Ser Lys Phe Phe Arg Val Leu Asn Gly Tyr Ser Leu Gln His
            885   890   895

Lys Leu Leu Leu Thr Gly Thr Pro Leu Gln Asn Asn Leu Glu Glu Leu
            900   905   910

Phe His Leu Leu Asn Phe Leu Thr Pro Glu Arg Phe His Asn Leu Glu
    915   920   925

Gly Phe Leu Glu Glu Phe Ala Asp Ile Ala Lys Glu Asp Gln Ile Lys
    930   935   940

Lys Leu His Asp Met Leu Gly Pro His Met Leu Arg Arg Leu Lys Ala
945   950   955   960

Asp Val Phe Lys Asn Met Pro Ser Lys Thr Glu Leu Ile Val Arg Val
            965   970   975

Glu Leu Ser Pro Met Gln Lys Lys Tyr Tyr Lys Tyr Ile Leu Thr Arg
    980   985   990

Asn Phe Glu Ala Leu Asn Ala Arg Gly Gly Gly Asn Gln Val Ser Leu
    995   1000   1005

Leu Asn Val Val Met Asp Leu Lys Lys Cys Cys Asn His Pro Tyr
    1010   1015   1020

Leu Phe Pro Val Ala Ala Met Glu Ala Pro Lys Met Pro Asn Gly

953

```
             1025                    1030                    1035


Met Tyr Asp Gly Ser Ala Leu  Ile Arg Ala Ser Gly  Lys Leu Leu
        1040                 1045                 1050


Leu Leu Gln Lys Met Leu Lys  Asn Leu Lys Glu Gly  Gly His Arg
        1055                 1060                 1065


Val Leu Ile Phe Ser Gln Met  Thr Lys Met Leu Asp  Leu Leu Glu
        1070                 1075                 1080


Asp Phe Leu Glu His Glu Gly  Tyr Lys Tyr Glu Arg  Ile Asp Gly
        1085                 1090                 1095


Gly Ile Thr Gly Asn Met Arg  Gln Glu Ala Ile Asp  Arg Phe Asn
        1100                 1105                 1110


Ala Pro Gly Ala Gln Gln Phe  Cys Phe Leu Leu Ser  Thr Arg Ala
        1115                 1120                 1125


Gly Gly Leu Gly Ile Asn Leu  Ala Thr Ala Asp Thr  Val Ile Ile
        1130                 1135                 1140


Tyr Asp Ser Asp Trp Asn Pro  His Asn Asp Ile Gln  Ala Phe Ser
        1145                 1150                 1155


Arg Ala His Arg Ile Gly Gln  Asn Lys Lys Val Met  Ile Tyr Arg
        1160                 1165                 1170


Phe Val Thr Arg Ala Ser Val  Glu Glu Arg Ile Thr  Gln Val Ala
        1175                 1180                 1185


Lys Lys Lys Met Met Leu Thr  His Leu Val Val Arg  Pro Gly Leu
        1190                 1195                 1200


Gly Ser Lys Thr Gly Ser Met  Ser Lys Gln Glu Leu  Asp Asp Ile
        1205                 1210                 1215


Leu Lys Phe Gly Thr Glu Glu  Leu Phe Lys Asp Glu  Ala Thr Asp
        1220                 1225                 1230


Gly Gly Gly Asp Asn Lys Glu  Gly Glu Asp Ser Ser  Val Ile His
        1235                 1240                 1245


Tyr Asp Asp Lys Ala Ile Glu  Arg Leu Leu Asp Arg  Asn Gln Asp
        1250                 1255                 1260
```

954

```
Glu Thr  Glu Asp Thr Glu Leu  Gln Gly Met Asn Glu  Tyr Leu Ser
    1265             1270             1275

Ser Phe  Lys Val Ala Gln Tyr  Val Val Arg Glu Glu  Glu Met Gly
    1280             1285             1290

Glu Glu  Glu Glu Val Glu Arg  Glu Ile Ile Lys Gln  Glu Glu Ser
    1295             1300             1305

Val Asp  Pro Asp Tyr Trp Glu  Lys Leu Leu Arg His  His Tyr Glu
    1310             1315             1320

Gln Gln  Gln Glu Asp Leu Ala  Arg Asn Leu Gly Lys  Gly Lys Arg
    1325             1330             1335

Ile Arg  Lys Gln Val Asn Tyr  Asn Asp Gly Ser Gln  Glu Asp Arg
    1340             1345             1350

Asp Trp  Gln Asp Asp Gln Ser  Asp Asn Gln Ser Asp  Tyr Ser Val
    1355             1360             1365

Ala Ser  Glu Glu Gly Asp Glu  Asp Phe Asp Glu Arg  Ser Glu Ala
    1370             1375             1380

Pro Arg  Arg Pro Ser Arg Lys  Gly Leu Arg Asn Asp  Lys Asp Lys
    1385             1390             1395

Pro Leu  Pro Pro Leu Leu Ala  Arg Val Gly Gly Asn  Ile Glu Val
    1400             1405             1410

Leu Gly  Phe Asn Ala Arg Gln  Arg Lys Ala Phe Leu  Asn Ala Ile
    1415             1420             1425

Met Arg  Tyr Gly Met Pro Pro  Gln Asp Ala Phe Thr  Thr Gln Trp
    1430             1435             1440

Leu Val  Arg Asp Leu Arg Gly  Lys Ser Glu Lys Glu  Phe Lys Ala
    1445             1450             1455

Tyr Val  Ser Leu Phe Met Arg  His Leu Cys Glu Pro  Gly Ala Asp
    1460             1465             1470

Gly Ala  Glu Thr Phe Ala Asp  Gly Val Pro Arg Glu  Gly Leu Ser
    1475             1480             1485
```

955

Arg Gln His Val Leu Thr Arg Ile Gly Val Met Ser Leu Ile Arg
    1490   1495   1500

Lys Lys Val Gln Glu Phe Glu His Val Asn Gly Arg Trp Ser Met
    1505   1510   1515

Pro Glu Leu Ala Glu Val Glu Glu Asn Lys Lys Met Ser Gln Pro
    1520   1525   1530

Gly Ser Pro Ser Pro Lys Thr Pro Thr Pro Ser Thr Pro Gly Asp
    1535   1540   1545

Thr Gln Pro Asn Thr Pro Ala Pro Val Pro Pro Ala Glu Asp Gly
    1550   1555   1560

Ile Lys Ile Glu Glu Asn Ser Leu Lys Glu Glu Glu Ser Ile Glu
    1565   1570   1575

Gly Glu Lys Glu Val Lys Ser Thr Ala Pro Glu Thr Ala Ile Glu
    1580   1585   1590

Cys Thr Gln Ala Pro Ala Pro Ala Ser Glu Asp Glu Lys Val Val
    1595   1600   1605

Val Glu Pro Pro Glu Gly Glu Glu Lys Val Glu Lys Ala Glu Val
    1610   1615   1620

Lys Glu Arg Thr Glu Glu Pro Met Glu Thr Glu Pro Lys Gly Ala
    1625   1630   1635

Ala Asp Val Glu Lys Val Glu Glu Lys Ser Ala Ile Asp Leu Thr
    1640   1645   1650

Pro Ile Val Val Glu Asp Lys Glu Glu Lys Lys Glu Glu Glu Glu
    1655   1660   1665

Lys Lys Glu Val Met Leu Gln Asn Gly Glu Thr Pro Lys Asp Leu
    1670   1675   1680

Asn Asp Glu Lys Gln Lys Lys Asn Ile Lys Gln Arg Phe Met Phe
    1685   1690   1695

Asn Ile Ala Asp Gly Gly Phe Thr Glu Leu His Ser Leu Trp Gln
    1700   1705   1710

956

```
Asn Glu  Glu Arg Ala Ala Thr  Val Thr Lys Lys Thr  Tyr Glu Ile
    1715               1720               1725


Trp His  Arg Arg His Asp Tyr  Trp Leu Leu Ala Gly  Ile Ile Asn
    1730               1735               1740


His Gly  Tyr Ala Arg Trp Gln  Asp Ile Gln Asn Asp  Pro Arg Tyr
    1745               1750               1755


Ala Ile  Leu Asn Glu Pro Phe  Lys Gly Glu Met Asn  Arg Gly Asn
    1760               1765               1770


Phe Leu  Glu Ile Lys Asn Lys  Phe Leu Ala Arg Arg  Phe Lys Leu
    1775               1780               1785


Leu Glu  Gln Ala Leu Val Ile  Glu Glu Gln Leu Arg  Arg Ala Ala
    1790               1795               1800


Tyr Leu  Asn Met Ser Glu Asp  Pro Ser His Pro Ser  Met Ala Leu
    1805               1810               1815


Asn Thr  Arg Phe Ala Glu Val  Glu Cys Leu Ala Glu  Ser His Gln
    1820               1825               1830


His Leu  Ser Lys Glu Ser Met  Ala Gly Asn Lys Pro  Ala Asn Ala
    1835               1840               1845


Val Leu  His Lys Val Leu Lys  Gln Leu Glu Glu Leu  Leu Ser Asp
    1850               1855               1860


Met Lys  Ala Asp Val Thr Arg  Leu Pro Ala Thr Ile  Ala Arg Ile
    1865               1870               1875


Pro Pro  Val Ala Val Arg Leu  Gln Met Ser Glu Arg  Asn Ile Leu
    1880               1885               1890


Ser Arg  Leu Ala Asn Arg Ala  Pro Glu Pro Thr Pro  Gln Gln Val
    1895               1900               1905


Ala Gln  Gln Gln
    1910
```

```
<210>  2562
<211>  345
<212>  PRT
<213>  Homo sapiens
```

<400> 2562

```
Met Pro Gln Arg Pro Ala Ala Ser Asn Ile Pro Val Val Gly Ser Pro
1               5                   10                  15

Asn Pro Pro Ser Thr His Phe Ala Ser Gln Asn Gln His Ser Tyr Ser
            20                  25                  30

Ser Pro Pro Trp Ala Gly Gln His Asn Arg Lys Gly Glu Lys Asn Gly
        35                  40                  45

Met Gly Leu Cys Arg Leu Ser Met Lys Val Trp Glu Thr Val Gln Arg
    50                  55                  60

Lys Gly Thr Thr Ser Cys Gln Glu Val Val Gly Glu Leu Val Ala Lys
65                  70                  75                  80

Phe Arg Ala Ala Ser Asn His Ala Ser Pro Asn Glu Ser Ala Tyr Asp
            85                  90                  95

Val Lys Asn Ile Lys Arg Arg Thr Tyr Asp Ala Leu Asn Val Leu Met
            100                 105                 110

Ala Met Asn Ile Ile Ser Arg Glu Lys Lys Lys Ile Lys Trp Ile Gly
        115                 120                 125

Leu Thr Thr Asn Ser Ala Gln Asn Cys Gln Asn Leu Arg Val Glu Arg
    130                 135                 140

Gln Lys Arg Leu Glu Arg Ile Lys Gln Lys Gln Ser Glu Leu Gln Gln
145                 150                 155                 160

Leu Ile Leu Gln Gln Ile Ala Phe Lys Asn Leu Val Leu Arg Asn Gln
            165                 170                 175

Tyr Val Glu Glu Gln Val Ser Gln Arg Pro Leu Pro Asn Ser Val Ile
            180                 185                 190

His Val Pro Phe Ile Ile Ile Ser Ser Ser Lys Lys Thr Val Ile Asn
        195                 200                 205

Cys Ser Ile Ser Asp Asp Lys Ser Glu Tyr Leu Phe Lys Phe Asn Ser
    210                 215                 220

Ser Phe Glu Ile His Asp Asp Thr Glu Val Leu Met Trp Met Gly Met
225                 230                 235                 240
```

```
    Thr Phe Gly Leu Glu Ser Gly Ser Cys Ser Ala Glu Asp Leu Lys Met
                    245                 250                 255


    Ala Arg Asn Leu Val Pro Lys Ala Leu Glu Pro Tyr Val Thr Glu Met
                    260                 265                 270


    Ala Gln Gly Thr Phe Gly Gly Val Phe Thr Thr Ala Gly Ser Arg Ser
                275                 280                 285


    Asn Gly Thr Trp Leu Ser Ala Ser Asp Leu Thr Asn Ile Ala Ile Gly
            290                 295                 300


    Met Leu Ala Thr Ser Ser Gly Gly Ser Gln Tyr Ser Gly Ser Arg Val
    305                 310                 315                 320


    Glu Thr Pro Ala Val Glu Glu Glu Glu Glu Asp Asn Asn Asp Asp
                    325                 330                 335


    Asp Leu Ser Glu Asn Asp Glu Asp Asp
                340                 345



    <210>   2563
    <211>   553
    <212>   PRT
    <213>   Homo sapiens

    <400>   2563

    Met Ser Thr Glu Thr Glu Leu Gln Val Ala Val Lys Thr Ser Ala Lys
    1               5                   10                  15


    Lys Asp Ser Arg Lys Lys Gly Gln Asp Arg Ser Glu Ala Thr Leu Ile
                20                  25                  30


    Lys Arg Phe Lys Gly Glu Gly Val Arg Tyr Lys Ala Lys Leu Ile Gly
                35                  40                  45


    Ile Asp Glu Val Ser Ala Ala Arg Gly Asp Lys Leu Cys Gln Asp Ser
        50                  55                  60


    Met Met Lys Leu Lys Gly Val Val Ala Gly Ala Arg Ser Lys Gly Glu
    65                  70                  75                  80


    His Lys Gln Lys Ile Phe Leu Thr Ile Ser Phe Gly Gly Ile Lys Ile
                    85                  90                  95


    Phe Asp Glu Lys Thr Gly Ala Leu Gln His His His Ala Val His Glu
```

```
                 100                    105                    110
```

Ile Ser Tyr Ile Ala Lys Asp Ile Thr Asp His Arg Ala Phe Gly Tyr
            115   120   125

Val Cys Gly Lys Glu Gly Asn His Arg Phe Val Ala Ile Lys Thr Ala
    130   135   140

Gln Ala Ala Glu Pro Val Ile Leu Asp Leu Arg Asp Leu Phe Gln Leu
145   150   155   160

Ile Tyr Glu Leu Lys Gln Arg Glu Glu Leu Glu Lys Lys Ala Gln Lys
                165   170   175

Asp Lys Gln Cys Glu Gln Ala Val Tyr Gln Thr Ile Leu Glu Glu Asp
            180   185   190

Val Glu Asp Pro Val Tyr Gln Tyr Ile Val Phe Glu Ala Gly His Glu
    195   200   205

Pro Ile Arg Asp Pro Glu Thr Glu Glu Asn Ile Tyr Gln Val Pro Thr
    210   215   220

Ser Gln Lys Lys Glu Gly Val Tyr Asp Val Pro Lys Ser Gln Pro Ala
225   230   235   240

Val Thr Gln Leu Glu Leu Phe Gly Asp Met Ser Thr Pro Pro Asp Ile
                245   250   255

Thr Ser Pro Pro Thr Pro Ala Thr Pro Gly Asp Ala Phe Ile Pro Ser
            260   265   270

Ser Ser Gln Thr Leu Pro Ala Ser Ala Asp Val Phe Ser Ser Val Pro
            275   280   285

Phe Gly Thr Ala Ala Val Pro Ser Gly Tyr Val Ala Met Gly Ala Val
    290   295   300

Leu Pro Ser Phe Trp Gly Gln Gln Pro Leu Val Gln Gln Gln Met Val
305   310   315   320

Met Gly Ala Gln Pro Pro Val Ala Gln Val Met Pro Gly Ala Gln Pro
            325   330   335

Ile Ala Trp Gly Gln Pro Gly Leu Phe Pro Ala Thr Gln Gln Pro Trp
            340   345   350

960

Pro Thr Val Ala Gly Gln Phe Pro Pro Ala Ala Phe Met Pro Thr Gln
        355   360   365

Thr Val Met Pro Leu Pro Ala Ala Met Phe Gln Gly Pro Leu Thr Pro
        370   375   380

Leu Ala Thr Val Pro Gly Thr Ser Asp Ser Thr Arg Ser Ser Pro Gln
385   390   395   400

Thr Asp Lys Pro Arg Gln Lys Met Gly Lys Glu Thr Phe Lys Asp Phe
            405   410   415

Gln Met Ala Gln Pro Pro Pro Val Pro Ser Arg Lys Pro Asp Gln Pro
                420   425   430

Ser Leu Thr Cys Thr Ser Glu Ala Phe Ser Ser Tyr Phe Asn Lys Val
        435   440   445

Gly Val Ala Gln Asp Thr Asp Asp Cys Asp Asp Phe Asp Ile Ser Gln
450   455   460

Leu Asn Leu Thr Pro Val Thr Ser Thr Thr Pro Ser Thr Asn Ser Pro
465   470   475   480

Pro Thr Pro Ala Pro Arg Gln Ser Ser Pro Ser Lys Ser Ser Ala Ser
                485   490   495

His Ala Ser Asp Pro Thr Thr Asp Asp Ile Phe Glu Glu Gly Phe Glu
            500   505   510

Ser Pro Ser Lys Ser Glu Glu Gln Glu Ala Pro Asp Gly Ser Gln Ala
        515   520   525

Ser Ser Asn Ser Asp Pro Phe Gly Glu Pro Ser Gly Glu Pro Ser Gly
        530   535   540

Asp Asn Ile Ser Pro Gln Ala Gly Ser
545   550

<210>   2564
<211>   1336
<212>   PRT
<213>   Homo sapiens

<400>   2564

```
Met Glu Asn Leu Pro Ala Val Thr Thr Glu Glu Pro Thr Pro Met Gly
1               5                   10                  15


Arg Gly Pro Val Gly Pro Ser Gly Gly Ser Thr Arg Asp Gln Val
            20              25                  30


Arg Thr Val Val Met Arg Pro Ser Val Ser Trp Glu Lys Ala Gly Pro
        35                  40                  45


Glu Glu Ala Lys Ala Pro Val Arg Gly Asp Glu Ala Pro Pro Ala Arg
    50                  55                  60


Val Ala Gly Pro Ala Ala Gly Thr Pro Pro Cys Gln Met Gly Val Tyr
65                  70                  75                  80


Pro Thr Asp Leu Thr Leu Gln Leu Leu Ala Val Arg Arg Lys Ser Arg
                85                  90                  95


Leu Arg Asp Pro Gly Leu Gln Gln Thr Leu Arg Gly Gln Leu Arg Leu
            100                 105                 110


Leu Glu Asn Asp Ser Arg Glu Met Ala Arg Val Leu Gly Glu Leu Ser
        115                 120                 125


Ala Arg Leu Leu Ser Ile His Ser Asp Gln Asp Arg Ile Val Val Thr
    130                 135                 140


Phe Lys Thr Phe Glu Glu Ile Trp Lys Phe Ser Thr Tyr His Ala Leu
145                 150                 155                 160


Gly Phe Thr His His Cys Leu Ala Asn Leu Leu Met Asp Gln Ala Phe
                165                 170                 175


Trp Leu Leu Leu Pro Ser Glu Glu Glu Thr Ala Ile Gln Val His
            180                 185                 190


Val Asp Glu Asn Ala Leu Arg Leu Thr His Glu Ser Leu Leu Ile Gln
            195                 200                 205


Glu Gly Pro Phe Phe Val Leu Cys Pro Asp His His Val Arg Val Met
    210                 215                 220


Thr Gly Pro Arg Asp Ala Gly Asn Gly Pro Gln Ala Leu Arg Gln Ala
225                 230                 235                 240


Ser Gly Ala Pro Gln Gly Glu Ala Ala Pro Glu Thr Asp Ser Ser Pro
```

962

                          245   250   255

    Pro Ser Pro Ser Val Ser Ser Glu Glu Val Ala Val Ala Ala Ala Pro
            260   265   270

    Glu Pro Leu Ile Pro Phe His Gln Trp Ala Leu Arg Ile Pro Gln Asp
            275   280   285

    Pro Ile Asp Asp Ala Met Gly Gly Pro Val Met Pro Gly Asn Pro Leu
            290   295   300

    Met Ala Val Gly Leu Ala Ser Ala Leu Ala Asp Phe Gln Gly Ser Gly
    305   310   315   320

    Pro Glu Glu Met Thr Phe Arg Gly Gly Asp Leu Ile Glu Ile Leu Gly
                      325   330   335

    Ala Gln Val Pro Ser Leu Pro Trp Cys Val Gly Arg His Ala Ala Ser
                      340   345   350

    Gly Arg Val Gly Phe Val Arg Ser Ser Leu Ile Ser Met Gln Gly Pro
                      355   360   365

    Val Ser Glu Leu Glu Ser Ala Ile Phe Leu Asn Glu Glu Glu Lys Ser
            370   375   380

    Phe Phe Ser Glu Gly Cys Phe Ser Glu Glu Asp Ala Arg Gln Leu Leu
    385   390   395   400

    Arg Arg Met Ser Gly Thr Asp Val Cys Ser Val Tyr Ser Leu Asp Ser
                      405   410   415

    Val Glu Glu Ala Glu Thr Glu Gln Pro Gln Glu Lys Glu Ile Pro Pro
            420   425   430

    Pro Cys Leu Ser Pro Glu Pro Gln Glu Thr Leu Gln Lys Val Lys Asn
            435   440   445

    Val Leu Glu Gln Cys Lys Thr Cys Pro Gly Cys Pro Gln Glu Pro Ala
        450   455   460

    Ser Trp Gly Leu Cys Ala Ala Ser Ser Asp Val Ser Leu Gln Asp Pro
    465   470   475   480

    Glu Glu Pro Ser Phe Cys Leu Glu Ala Glu Asp Asp Trp Glu Asp Pro
                      485   490   495

                                          963

Glu Ala Leu Ser Ser Leu Leu Leu Phe Leu Asn Ala Pro Gly Tyr Lys
            500   505   510

Ala Ser Phe Arg Gly Leu Tyr Asp Val Ala Leu Pro Trp Leu Ser Ser
            515   520   525

Val Phe Arg Ser Phe Ser Asp Glu Glu Glu Leu Thr Gly Arg Leu Ala
            530   535   540

Gln Ala Arg Gly Ala Ala Lys Lys Ala Gly Leu Leu Met Ala Leu Ala
545   550   555   560

Arg Leu Cys Phe Leu Leu Gly Arg Leu Cys Ser Arg Arg Leu Lys Leu
            565   570   575

Ser Gln Ala Arg Val Tyr Phe Glu Glu Ala Leu Gly Ala Leu Glu Gly
            580   585   590

Ser Phe Gly Asp Leu Phe Leu Val Val Ala Val Tyr Ala Asn Leu Ala
            595   600   605

Ser Ile Tyr Arg Lys Gln Lys Asn Arg Glu Lys Cys Ala Gln Val Val
610   615   620

Pro Lys Ala Met Ala Leu Leu Leu Gly Thr Pro Asp His Ile Cys Ser
625   630   635   640

Thr Glu Ala Glu Gly Glu Leu Leu Gln Leu Ala Leu Arg Arg Ala Val
            645   650   655

Gly Gly Gln Ser Leu Gln Ala Glu Ala Arg Ala Cys Phe Leu Leu Ala
            660   665   670

Arg His His Val His Leu Lys Gln Pro Glu Glu Ala Leu Pro Phe Leu
            675   680   685

Glu Arg Leu Leu Leu Leu His Arg Asp Ser Gly Ala Pro Glu Ala Ala
            690   695   700

Trp Leu Ser Asp Cys Tyr Leu Leu Leu Ala Asp Ile Tyr Ser Arg Lys
705   710   715   720

Cys Leu Pro His Leu Val Leu Ser Cys Val Lys Val Ala Ser Leu Arg
            725   730   735

964

Thr Arg Gly Ser Leu Ala Gly Ser Leu Arg Ser Val Asn Leu Val Leu
        740   745   750

Gln Asn Ala Pro Gln Pro His Ser Leu Pro Ala Gln Thr Ser His Tyr
        755   760   765

Leu Arg Gln Ala Leu Ala Ser Leu Thr Pro Gly Thr Gly Gln Ala Leu
        770   775   780

Arg Gly Pro Leu Tyr Thr Ser Leu Ala Gln Leu Tyr Ser His His Gly
785   790   795   800

Cys His Gly Pro Ala Ile Thr Phe Met Thr Gln Ala Val Glu Ala Ser
            805   810   815

Ala Ile Ala Gly Val Arg Ala Ile Val Asp His Leu Val Ala Leu Ala
            820   825   830

Trp Leu His Val Leu His Gly Gln Ser Pro Val Ala Leu Asp Ile Leu
        835   840   845

Gln Ser Val Arg Asp Ala Val Val Ala Ser Glu Asp Gln Glu Gly Val
        850   855   860

Ile Ala Asn Met Val Ala Val Ala Leu Lys Arg Thr Gly Arg Thr Arg
865   870   875   880

Gln Ala Ala Glu Ser Tyr Tyr Arg Ala Leu Arg Val Ala Arg Asp Leu
                885   890   895

Gly Gln Gln Arg Asn Gln Ala Val Gly Leu Ala Asn Phe Gly Ala Leu
            900   905   910

Cys Leu His Ala Gly Ala Ser Arg Leu Ala Gln His Tyr Leu Leu Glu
        915   920   925

Ala Val Arg Leu Phe Ser Arg Leu Pro Leu Gly Glu Cys Gly Arg Asp
        930   935   940

Phe Thr His Val Leu Leu Gln Leu Gly His Leu Cys Thr Arg Gln Gly
945   950   955   960

Pro Ala Gln Gln Gly Lys Gly Tyr Tyr Glu Trp Ala Leu Leu Val Ala
                965   970   975

965

Val Glu Met Gly His Val Glu Ser Gln Leu Arg Ala Val Gln Arg Leu
            980   985   990

Cys His Phe Tyr Ser Ala Val Met Pro Ser Glu Ala Gln Cys Val Ile
            995   1000   1005

Tyr His Glu Leu Gln Leu Ser Pro Ala Cys Lys Val Ala Asp Lys
    1010   1015   1020

Val Leu Glu Gly Gln Leu Leu Glu Thr Ile Ser Gln Leu Tyr Leu
    1025   1030   1035

Ser Leu Gly Thr Glu Arg Ala Tyr Lys Ser Ala Leu Asp Tyr Thr
    1040   1045   1050

Lys Arg Ser Leu Gly Ile Phe Ile Asp Leu Gln Lys Lys Glu Lys
    1055   1060   1065

Glu Ala His Ala Trp Leu Gln Ala Gly Lys Ile Tyr Tyr Ile Leu
    1070   1075   1080

Arg Gln Ser Glu Leu Val Asp Leu Tyr Ile Gln Val Ala Gln Asn
    1085   1090   1095

Val Ala Leu Tyr Thr Gly Asp Pro Asn Leu Gly Leu Glu Leu Phe
    1100   1105   1110

Glu Ala Ala Gly Asp Ile Phe Phe Asp Gly Ala Trp Glu Arg Glu
    1115   1120   1125

Lys Ala Val Ser Phe Tyr Arg Asp Arg Ala Leu Pro Leu Ala Val
    1130   1135   1140

Thr Thr Gly Asn Arg Lys Ala Glu Leu Arg Leu Cys Asn Lys Leu
    1145   1150   1155

Val Ala Leu Leu Ala Thr Leu Glu Glu Pro Gln Glu Gly Leu Glu
    1160   1165   1170

Phe Ala His Met Ala Leu Ala Leu Ser Ile Thr Leu Gly Asp Arg
    1175   1180   1185

Leu Asn Glu Arg Val Ala Tyr His Arg Leu Ala Ala Leu Gln His
    1190   1195   1200

Arg Leu Gly His Gly Glu Leu Ala Glu His Phe Tyr Leu Lys Ala

```
          1205                    1210                         1215


  Leu Ser  Leu Cys Asn Ser Pro  Leu Glu Phe Asp Glu  Glu Thr Leu
          1220                1225                1230


  Tyr Tyr  Val Lys Val Tyr Leu  Val Leu Gly Asp Ile  Ile Phe Tyr
          1235                1240                1245


  Asp Leu  Lys Asp Pro Phe Asp  Ala Ala Gly Tyr Tyr  Gln Leu Ala
          1250                1255                1260


  Leu Ala  Ala Ala Val Asp Leu  Gly Asn Lys Lys Ala  Gln Leu Lys
          1265                1270                1275


  Ile Tyr  Thr Arg Leu Ala Thr  Ile Tyr His Asn Phe  Leu Leu Asp
          1280                1285                1290


  Arg Glu  Lys Ser Leu Phe Phe  Tyr Gln Lys Ala Arg  Thr Phe Ala
          1295                1300                1305


  Thr Glu  Leu Asn Val Arg Arg  Val Asn Leu Pro Pro  Leu Pro Leu
          1310                1315                1320


  Cys Gly  Trp Ala Pro Trp Leu  Ala Pro Ser His Pro  Arg
          1325                1330                1335


<210>  2565
<211>  93
<212>  PRT
<213>  Homo sapiens

<400>  2565

Met Leu Thr Glu Leu Glu Lys Ala Leu Asn Ser Ile Ile Asp Val Tyr
1               5                   10                  15


His Lys Tyr Ser Leu Ile Lys Gly Asn Phe His Ala Val Tyr Arg Asp
            20                  25                  30


Asp Leu Lys Lys Leu Leu Glu Thr Glu Cys Pro Gln Tyr Ile Arg Lys
            35                  40                  45


Lys Gly Ala Asp Val Trp Phe Lys Glu Leu Asp Ile Asn Thr Asp Gly
      50                  55                  60


Ala Val Asn Phe Gln Glu Phe Leu Ile Leu Val Ile Lys Met Gly Val
65                  70                  75                  80
```

```
Ala Ala His Lys Lys Ser His Glu Glu Ser His Lys Glu
                85                  90


<210>  2566
<211>  1186
<212>  PRT
<213>  Homo sapiens

<400>  2566

Met Gly Val Gln Gly Leu Trp Lys Leu Leu Glu Cys Ser Gly Arg Gln
1               5                  10                  15


Val Ser Pro Glu Ala Leu Glu Gly Lys Ile Leu Ala Val Asp Ile Ser
            20                  25                  30


Ile Trp Leu Asn Gln Ala Leu Lys Gly Val Arg Asp Arg His Gly Asn
        35                  40                  45


Ser Ile Glu Asn Pro His Leu Leu Thr Leu Phe His Arg Leu Cys Lys
    50                  55                  60


Leu Leu Phe Phe Arg Ile Arg Pro Ile Phe Val Phe Asp Gly Asp Ala
65                  70                  75                  80


Pro Leu Leu Lys Lys Gln Thr Leu Val Lys Arg Arg Gln Arg Lys Asp
                85                  90                  95


Leu Ala Ser Ser Asp Ser Arg Lys Thr Thr Glu Lys Leu Leu Lys Thr
                100                 105                 110


Phe Leu Lys Arg Gln Ala Ile Lys Thr Ala Phe Arg Ser Lys Arg Asp
        115                 120                 125


Glu Ala Leu Pro Ser Leu Thr Gln Val Arg Arg Glu Asn Asp Leu Tyr
    130                 135                 140


Val Leu Pro Pro Leu Gln Glu Glu Glu Lys His Ser Ser Glu Glu Glu
145                 150                 155                 160


Asp Glu Lys Glu Trp Gln Glu Arg Met Asn Gln Lys Gln Ala Leu Gln
                165                 170                 175


Glu Glu Phe Phe His Asn Pro Gln Ala Ile Asp Ile Glu Ser Glu Asp
            180                 185                 190


Phe Ser Ser Leu Pro Pro Glu Val Lys His Glu Ile Leu Thr Asp Met
```

```
                195                    200                    205
```

```
    Lys Glu Phe Thr Lys Arg Arg Arg Thr Leu Phe Glu Ala Met Pro Glu
            210              215              220
```

```
    Glu Ser Asp Asp Phe Ser Gln Tyr Gln Leu Lys Gly Leu Leu Lys Lys
    225              230              235              240
```

```
    Asn Tyr Leu Asn Gln His Ile Glu His Val Gln Lys Glu Met Asn Gln
                245              250              255
```

```
    Gln His Ser Gly His Ile Arg Arg Gln Tyr Glu Asp Glu Gly Gly Phe
                260              265              270
```

```
    Leu Lys Glu Val Glu Ser Arg Arg Val Val Ser Glu Asp Thr Ser His
            275              280              285
```

```
    Tyr Ile Leu Ile Lys Gly Ile Gln Ala Lys Thr Val Ala Glu Val Asp
        290              295              300
```

```
    Ser Glu Ser Leu Pro Ser Ser Ser Lys Met His Gly Met Ser Phe Asp
    305              310              315              320
```

```
    Val Lys Ser Ser Pro Cys Glu Lys Leu Lys Thr Glu Lys Glu Pro Asp
                325              330              335
```

```
    Ala Thr Pro Pro Ser Pro Arg Thr Leu Leu Ala Met Gln Ala Ala Leu
            340              345              350
```

```
    Leu Gly Ser Ser Ser Glu Glu Glu Leu Glu Ser Glu Asn Arg Arg Gln
            355              360              365
```

```
    Ala Arg Gly Arg Asn Ala Pro Ala Ala Val Asp Glu Gly Ser Ile Ser
        370              375              380
```

```
    Pro Arg Thr Leu Ser Ala Ile Lys Arg Ala Leu Asp Asp Asp Glu Asp
    385              390              395              400
```

```
    Val Lys Val Cys Ala Gly Asp Asp Val Gln Thr Gly Gly Pro Gly Ala
                405              410              415
```

```
    Glu Glu Met Arg Ile Asn Ser Ser Thr Glu Asn Ser Asp Glu Gly Leu
            420              425              430
```

```
    Lys Val Arg Asp Gly Lys Gly Ile Pro Phe Thr Ala Thr Leu Ala Ser
        435              440              445
```

Ser Ser Val Asn Ser Ala Glu Glu His Val Ala Ser Thr Asn Glu Gly
    450   455   460

Arg Glu Pro Thr Asp Ser Val Pro Lys Glu Gln Met Ser Leu Val His
465   470   475   480

Val Gly Thr Glu Ala Phe Pro Ile Ser Asp Glu Ser Met Ile Lys Asp
            485   490   495

Arg Lys Asp Arg Leu Pro Leu Glu Ser Ala Val Val Arg His Ser Asp
            500   505   510

Ala Pro Gly Leu Pro Asn Gly Arg Glu Leu Thr Pro Ala Ser Pro Thr
            515   520   525

Cys Thr Asn Ser Val Ser Lys Asn Glu Thr His Ala Glu Val Leu Glu
    530   535   540

Gln Gln Asn Glu Leu Cys Pro Tyr Glu Ser Lys Phe Asp Ser Ser Leu
545   550   555   560

Leu Ser Ser Asp Asp Glu Thr Lys Cys Lys Pro Asn Ser Ala Ser Glu
            565   570   575

Val Ile Gly Pro Val Ser Leu Gln Glu Thr Ser Ser Ile Val Ser Val
            580   585   590

Pro Ser Glu Ala Val Asp Asn Val Glu Asn Val Val Ser Phe Asn Ala
            595   600   605

Lys Glu His Glu Asn Phe Leu Glu Thr Ile Gln Glu Gln Gln Thr Thr
    610   615   620

Glu Ser Ala Gly Gln Asp Leu Ile Ser Ile Pro Lys Ala Val Glu Pro
625   630   635   640

Met Glu Ile Asp Ser Glu Glu Ser Glu Ser Asp Gly Ser Phe Ile Glu
            645   650   655

Val Gln Ser Val Ile Ser Asp Glu Glu Leu Gln Ala Glu Phe Pro Glu
            660   665   670

Thr Ser Lys Pro Pro Ser Glu Gln Gly Glu Glu Glu Leu Val Gly Thr
    675   680   685

970

Arg Glu Gly Glu Ala Pro Ala Glu Ser Glu Ser Leu Leu Arg Asp Asn
    690   695   700

Ser Glu Arg Asp Asp Val Asp Gly Glu Pro Gln Glu Ala Glu Lys Asp
705   710   715   720

Ala Glu Asp Ser Leu His Glu Trp Gln Asp Ile Asn Leu Glu Glu Leu
            725   730   735

Glu Thr Leu Glu Ser Asn Leu Leu Ala Gln Gln Asn Ser Leu Lys Ala
        740   745   750

Gln Lys Gln Gln Gln Glu Arg Ile Ala Ala Thr Val Thr Gly Gln Met
        755   760   765

Phe Leu Glu Ser Gln Glu Leu Leu Arg Leu Phe Gly Ile Pro Tyr Ile
    770   775   780

Gln Ala Pro Met Glu Ala Glu Ala Gln Cys Ala Ile Leu Asp Leu Thr
785   790   795   800

Asp Gln Thr Ser Gly Thr Ile Thr Asp Asp Ser Asp Ile Trp Leu Phe
            805   810   815

Gly Ala Arg His Val Tyr Arg Asn Phe Phe Asn Lys Asn Lys Phe Val
            820   825   830

Glu Tyr Tyr Gln Tyr Val Asp Phe His Asn Gln Leu Gly Leu Asp Arg
        835   840   845

Asn Lys Leu Ile Asn Leu Ala Tyr Leu Leu Gly Ser Asp Tyr Thr Glu
    850   855   860

Gly Ile Pro Thr Val Gly Cys Val Thr Ala Met Glu Ile Leu Asn Glu
865   870   875   880

Phe Pro Gly His Gly Leu Glu Pro Leu Leu Lys Phe Ser Glu Trp Trp
            885   890   895

His Glu Ala Gln Lys Asn Pro Lys Ile Arg Pro Asn Pro His Asp Thr
        900   905   910

Lys Val Lys Lys Lys Leu Arg Thr Leu Gln Leu Thr Pro Gly Phe Pro
    915   920   925

Asn Pro Ala Val Ala Glu Ala Tyr Leu Lys Pro Val Val Asp Asp Ser
    930   935   940

Lys Gly Ser Phe Leu Trp Gly Lys Pro Asp Leu Asp Lys Ile Arg Glu
945   950   955   960

Phe Cys Gln Arg Tyr Phe Gly Trp Asn Arg Thr Lys Thr Asp Glu Ser
            965   970   975

Leu Phe Pro Val Leu Lys Gln Leu Asp Ala Gln Gln Thr Gln Leu Arg
        980   985   990

Ile Asp Ser Phe Phe Arg Leu Ala Gln Gln Glu Lys Glu Asp Ala Lys
    995   1000   1005

Arg Ile Lys Ser Gln Arg Leu Asn Arg Ala Val Thr Cys Met Leu
    1010   1015   1020

Arg Lys Glu Lys Glu Ala Ala Ala Ser Glu Ile Glu Ala Val Ser
    1025   1030   1035

Val Ala Met Glu Lys Glu Phe Glu Leu Leu Asp Lys Ala Lys Arg
    1040   1045   1050

Lys Thr Gln Lys Arg Gly Ile Thr Asn Thr Leu Glu Glu Ser Ser
    1055   1060   1065

Ser Leu Lys Arg Lys Arg Leu Ser Asp Ser Lys Arg Lys Asn Thr
    1070   1075   1080

Cys Gly Gly Phe Leu Gly Glu Thr Cys Leu Ser Glu Ser Ser Asp
    1085   1090   1095

Gly Ser Ser Ser Glu His Ala Glu Ser Ser Ser Leu Met Asn Val
    1100   1105   1110

Gln Arg Arg Thr Ala Ala Lys Glu Pro Lys Thr Ser Ala Ser Asp
    1115   1120   1125

Ser Gln Asn Ser Val Lys Glu Ala Pro Val Lys Asn Gly Gly Ala
    1130   1135   1140

Thr Thr Ser Ser Ser Ser Asp Ser Asp Asp Asp Gly Gly Lys Glu
    1145   1150   1155

Lys Met Val Leu Val Thr Ala Arg Ser Val Phe Gly Lys Lys Arg

```
      1160                        1165                        1170


   Arg Lys  Leu Arg Arg Ala Arg  Gly Arg Lys Arg Lys  Thr
        1175                    1180                1185



   <210>  2567
   <211>  84
   <212>  PRT
   <213>  Homo sapiens

   <400>  2567

   Met Pro Leu Ala Lys Asp Leu Leu His Pro Ser Pro Glu Glu Glu Lys
   1               5                   10                  15


   Arg Lys His Lys Lys Lys Arg Leu Val Gln Ser Pro Asn Ser Tyr Phe
                20          25                  30


   Met Asp Val Lys Cys Pro Gly Cys Tyr Lys Ile Thr Thr Val Phe Ser
                35              40                  45


   His Ala Gln Thr Val Val Leu Cys Val Gly Cys Ser Thr Val Leu Cys
            50                  55                  60


   Gln Pro Thr Gly Gly Lys Ala Arg Leu Thr Glu Gly Cys Ser Phe Arg
   65                  70                  75                  80


   Arg Lys Gln His



   <210>  2568
   <211>  691
   <212>  PRT
   <213>  Homo sapiens

   <400>  2568

   Met Asp Gly Cys Lys Lys Glu Leu Pro Arg Leu Gln Glu Pro Glu Glu
   1               5                   10                  15


   Asp Glu Asp Cys Tyr Ile Leu Asn Val Gln Ser Ser Ser Asp Asp Thr
                20                  25                  30


   Ser Gly Ser Ser Val Ala Arg Arg Ala Pro Lys Arg Gln Ala Ser Cys
                35                  40                  45


   Ile Leu Asn Val Gln Ser Arg Ser Gly Asp Thr Ser Gly Ser Ser Val
       50                  55                  60
```

973

Ala Arg Arg Ala Pro Lys Arg Gln Ala Ser Ser Val Val Val Ile Asp
65   70   75   80

Ser Asp Ser Asp Glu Glu Cys His Thr His Glu Glu Lys Lys Ala Lys
                85   90   95

Leu Leu Glu Ile Asn Ser Asp Asp Glu Ser Pro Glu Cys Cys His Val
                100   105   110

Lys Pro Ala Ile Gln Glu Pro Pro Ile Val Ile Ser Asp Asp Asp Asn
            115   120   125

Asp Asp Asp Asn Gly Asn Asp Leu Glu Val Pro Asp Asp Asn Ser Asp
    130   135   140

Asp Ser Glu Ala Pro Asp Asp Asn Ser Asp Asp Ser Glu Ala Pro Asp
145   150   155   160

Asp Asn Ser Asp Asp Ser Glu Ala Pro Asp Asp Asn Ser Asp Asp Ser
            165   170   175

Glu Ala Pro Asp Asp Asn Ser Asp Asp Ser Asp Val Pro Asp Asp Asn
            180   185   190

Ser Asp Asp Ser Ser Asp Asp Asn Ser Asp Asp Ser Ser Asp Asp Asn
    195   200   205

Ser Asp Asp Ser Asp Val Pro Asp Asp Lys Ser Asp Asp Ser Asp Val
    210   215   220

Pro Asp Asp Ser Ser Asp Asp Ser Asp Val Pro Asp Asp Ser Ser Asp
225   230   235   240

Asp Ser Glu Ala Pro Asp Asp Ser Ser Asp Asp Ser Glu Ala Pro Asp
            245   250   255

Asp Ser Ser Asp Asp Ser Glu Ala Pro Asp Asp Ser Ser Asp Asp Ser
            260   265   270

Glu Ala Pro Asp Asp Ser Ser Asp Asp Ser Glu Ala Ser Asp Asp Ser
            275   280   285

Ser Asp Asp Ser Glu Ala Ser Asp Asp Ser Ser Asp Asp Ser Glu Ala
    290   295   300

Pro Asp Asp Lys Ser Asp Asp Ser Asp Val Pro Glu Asp Lys Ser Asp

974

                305   310   315   320

    Asp Ser Asp Val Pro Asp Asp Asn Ser Asp Asp Leu Glu Val Pro Val
                    325   330   335

    Pro Ala Glu Asp Leu Cys Asn Glu Gly Gln Ile Ala Ser Asp Glu Glu
                340   345   350

    Glu Leu Val Glu Ala Ala Ala Val Ser Gln His Asp Ser Ser Asp
                355   360   365

    Asp Ala Gly Glu Gln Asp Leu Gly Glu Asn Leu Ser Lys Pro Pro Ser
        370   375   380

    Asp Pro Glu Ala Asn Pro Glu Val Ser Glu Arg Lys Leu Pro Thr Glu
    385   390   395   400

    Glu Glu Pro Ala Pro Val Val Glu Gln Ser Gly Lys Arg Lys Ser Lys
                    405   410   415

    Thr Lys Thr Ile Val Glu Pro Pro Arg Lys Arg Gln Thr Lys Thr Lys
                420   425   430

    Asn Ile Val Glu Pro Pro Arg Lys Arg Gln Thr Lys Thr Lys Asn Ile
                435   440   445

    Val Glu Pro Leu Arg Lys Arg Lys Ala Lys Thr Lys Asn Val Ser Val
        450   455   460

    Thr Pro Gly His Lys Lys Arg Gly Pro Ser Lys Lys Lys Pro Gly Ala
    465   470   475   480

    Ala Lys Val Glu Lys Arg Lys Thr Arg Thr Pro Lys Cys Lys Val Pro
                    485   490   495

    Gly Cys Phe Leu Gln Asp Leu Glu Lys Ser Lys Lys Tyr Ser Gly Lys
                500   505   510

    Asn Leu Lys Arg Asn Lys Asp Glu Leu Val Gln Arg Ile Tyr Asp Leu
                515   520   525

    Phe Asn Arg Ser Val Cys Asp Lys Lys Leu Pro Glu Lys Leu Arg Ile
        530   535   540

    Gly Trp Asn Asn Lys Met Val Lys Thr Ala Gly Leu Cys Ser Thr Gly
    545   550   555   560

```
    Glu Met Trp Tyr Pro Lys Trp Arg Arg Phe Ala Lys Ile Gln Ile Gly
                565             570              575

    Leu Lys Val Cys Asp Ser Ala Asp Arg Ile Arg Asp Thr Leu Ile His
                580             585              590

    Glu Met Cys His Ala Ala Ser Trp Leu Ile Asp Gly Ile His Asp Ser
            595             600             605

    His Gly Asp Ala Trp Lys Tyr Tyr Ala Arg Lys Ser Asn Arg Ile His
        610             615             620

    Pro Glu Leu Pro Arg Val Thr Arg Cys His Asn Tyr Lys Ile Asn Tyr
    625             630             635             640

    Lys Val His Tyr Glu Cys Thr Gly Cys Lys Thr Arg Ile Gly Cys Tyr
                645             650             655

    Thr Lys Ser Leu Asp Thr Ser Arg Phe Ile Cys Ala Lys Cys Lys Gly
                660             665             670

    Ser Leu Val Met Val Pro Leu Thr Gln Lys Asp Gly Thr Arg Ile Val
            675             680             685

    Pro His Val
        690


    <210>  2569
    <211>  101
    <212>  PRT
    <213>  Homo sapiens

    <400>  2569

    Met Ser Asp Gln Glu Ala Lys Pro Ser Thr Glu Asp Leu Gly Asp Lys
    1               5               10              15

    Lys Glu Gly Glu Tyr Ile Lys Leu Lys Val Ile Gly Gln Asp Ser Ser
                20              25              30

    Glu Ile His Phe Lys Val Lys Met Thr Thr His Leu Lys Lys Leu Lys
            35              40              45

    Glu Ser Tyr Cys Gln Arg Gln Gly Val Pro Met Asn Ser Leu Arg Phe
        50              55              60
```

Leu Phe Glu Gly Gln Arg Ile Ala Asp Asn His Thr Pro Lys Glu Leu
65   70   75   80

Gly Met Glu Glu Glu Asp Val Ile Glu Val Tyr Gln Glu Gln Thr Gly
                85   90   95

Gly His Ser Thr Val
                100

<210> 2570
<211> 93
<212> PRT
<213> Homo sapiens

<400> 2570

Met Ser Gly Leu Arg Val Tyr Ser Thr Ser Val Thr Gly Ser Arg Glu
1   5   10   15

Ile Lys Ser Gln Gln Ser Glu Val Thr Arg Ile Leu Asp Gly Lys Arg
                20   25   30

Ile Gln Tyr Gln Leu Val Asp Ile Ser Gln Asp Asn Ala Leu Arg Asp
                35   40   45

Glu Met Arg Ala Leu Ala Gly Asn Pro Lys Ala Thr Pro Pro Gln Ile
        50   55   60

Val Asn Gly Asp Gln Tyr Cys Gly Asp Tyr Glu Leu Phe Val Glu Ala
65   70   75   80

Val Glu Gln Asn Thr Leu Gln Glu Phe Leu Lys Leu Ala
                85   90

<210> 2571
<211> 666
<212> PRT
<213> Homo sapiens

<400> 2571

Met Thr Pro Pro Pro Gly Arg Ala Ala Pro Ser Ala Pro Arg Ala
1   5   10   15

Arg Val Pro Gly Pro Pro Ala Arg Leu Gly Leu Pro Leu Arg Leu Arg
                20   25   30

Leu Leu Leu Leu Leu Trp Ala Ala Ala Ala Ser Ala Gln Gly His Leu
                35   40   45

Arg Ser Gly Pro Arg Ile Phe Ala Val Trp Lys Gly His Val Gly Gln
    50   55   60

Asp Arg Val Asp Phe Gly Gln Thr Glu Pro His Thr Val Leu Phe His
65   70   75   80

Glu Pro Gly Ser Ser Ser Val Trp Val Gly Gly Arg Gly Lys Val Tyr
            85   90   95

Leu Phe Asp Phe Pro Glu Gly Lys Asn Ala Ser Val Arg Thr Val Asn
            100   105   110

Ile Gly Ser Thr Lys Gly Ser Cys Leu Asp Lys Arg Asp Cys Glu Asn
        115   120   125

Tyr Ile Thr Leu Leu Glu Arg Arg Ser Glu Gly Leu Leu Ala Cys Gly
    130   135   140

Thr Asn Ala Arg His Pro Ser Cys Trp Asn Leu Val Asn Gly Thr Val
145   150   155   160

Val Pro Leu Gly Glu Met Arg Gly Tyr Ala Pro Phe Ser Pro Asp Glu
                165   170   175

Asn Ser Leu Val Leu Phe Glu Gly Asp Glu Val Tyr Ser Thr Ile Arg
            180   185   190

Lys Gln Glu Tyr Asn Gly Lys Ile Pro Arg Phe Arg Arg Ile Arg Gly
        195   200   205

Glu Ser Glu Leu Tyr Thr Ser Asp Thr Val Met Gln Asn Pro Gln Phe
    210   215   220

Ile Lys Ala Thr Ile Val His Gln Asp Gln Ala Tyr Asp Asp Lys Ile
225   230   235   240

Tyr Tyr Phe Phe Arg Glu Asp Asn Pro Asp Lys Asn Pro Glu Ala Pro
            245   250   255

Leu Asn Val Ser Arg Val Ala Gln Leu Cys Arg Gly Asp Gln Gly Gly
            260   265   270

Glu Ser Ser Leu Ser Val Ser Lys Trp Asn Thr Phe Leu Lys Ala Met
    275   280   285

978

Leu Val Cys Ser Asp Ala Ala Thr Asn Lys Asn Phe Asn Arg Leu Gln
    290   295   300

Asp Val Phe Leu Leu Pro Asp Pro Ser Gly Gln Trp Arg Asp Thr Arg
305   310   315   320

Val Tyr Gly Val Phe Ser Asn Pro Trp Asn Tyr Ser Ala Val Cys Val
            325   330   335

Tyr Ser Leu Gly Asp Ile Asp Lys Val Phe Arg Thr Ser Ser Leu Lys
            340   345   350

Gly Tyr His Ser Ser Leu Pro Asn Pro Arg Pro Gly Lys Cys Leu Pro
            355   360   365

Asp Gln Gln Pro Ile Pro Thr Glu Thr Phe Gln Val Ala Asp Arg His
    370   375   380

Pro Glu Val Ala Gln Arg Val Glu Pro Met Gly Pro Leu Lys Thr Pro
385   390   395   400

Leu Phe His Ser Lys Tyr His Tyr Gln Lys Val Ala Val His Arg Met
            405   410   415

Gln Ala Ser His Gly Glu Thr Phe His Val Leu Tyr Leu Thr Thr Asp
            420   425   430

Arg Gly Thr Ile His Lys Val Val Glu Pro Gly Glu Gln Glu His Ser
        435   440   445

Phe Ala Phe Asn Ile Met Glu Ile Gln Pro Phe Arg Arg Ala Ala Ala
    450   455   460

Ile Gln Thr Met Ser Leu Asp Ala Glu Arg Arg Lys Leu Tyr Val Ser
465   470   475   480

Ser Gln Trp Glu Val Ser Gln Val Pro Leu Asp Leu Cys Glu Val Tyr
            485   490   495

Gly Gly Gly Cys His Gly Cys Leu Met Ser Arg Asp Pro Tyr Cys Gly
            500   505   510

Trp Asp Gln Gly Arg Cys Ile Ser Ile Tyr Ser Ser Glu Arg Ser Val
        515   520   525

Leu Gln Ser Ile Asn Pro Ala Glu Pro His Lys Glu Cys Pro Asn Pro

979

```
        530                   535                   540
```

Lys Pro Asp Lys Ala Pro Leu Gln Lys Val Ser Leu Ala Pro Asn Ser
545   550   555   560

Arg Tyr Tyr Leu Ser Cys Pro Met Glu Ser Arg His Ala Thr Tyr Ser
                565   570   575

Trp Arg His Lys Glu Asn Val Glu Gln Ser Cys Glu Pro Gly His Gln
            580   585   590

Ser Pro Asn Cys Ile Leu Phe Ile Glu Asn Leu Thr Ala Gln Gln Tyr
        595   600   605

Gly His Tyr Phe Cys Glu Ala Gln Glu Gly Ser Tyr Phe Arg Glu Ala
    610   615   620

Gln His Trp Gln Leu Leu Pro Glu Asp Gly Ile Met Ala Glu His Leu
625   630   635   640

Leu Gly His Ala Cys Ala Leu Ala Ala Ser Leu Trp Leu Gly Val Leu
                645   650   655

Pro Thr Leu Thr Leu Gly Leu Leu Val His
            660   665


```
<210>  2572
<211>  162
<212>  PRT
<213>  Homo sapiens

<400>  2572
```

Met Arg Ser Ser Pro Gly Asn Met Glu Arg Ile Val Ile Cys Leu Met
1   5   10   15

Val Ile Phe Leu Gly Thr Leu Val His Lys Ser Ser Ser Gln Gly Gln
            20   25   30

Asp Arg His Met Ile Arg Met Arg Gln Leu Ile Asp Ile Val Asp Gln
        35   40   45

Leu Lys Asn Tyr Val Asn Asp Leu Val Pro Glu Phe Leu Pro Ala Pro
    50   55   60

Glu Asp Val Glu Thr Asn Cys Glu Trp Ser Ala Phe Ser Cys Phe Gln
65   70   75   80

```
Lys Ala Gln Leu Lys Ser Ala Asn Thr Gly Asn Asn Glu Arg Ile Ile
              85                  90                  95

Asn Val Ser Ile Lys Lys Leu Lys Arg Lys Pro Pro Ser Thr Asn Ala
              100                 105                 110

Gly Arg Arg Gln Lys His Arg Leu Thr Cys Pro Ser Cys Asp Ser Tyr
              115                 120                 125

Glu Lys Lys Pro Pro Lys Glu Phe Leu Glu Arg Phe Lys Ser Leu Leu
              130                 135                 140

Gln Lys Met Ile His Gln His Leu Ser Ser Arg Thr His Gly Ser Glu
145                 150                 155                 160

Asp Ser
```

```
<210>  2573
<211>  1050
<212>  PRT
<213>  Homo sapiens

<400>  2573
```

```
Met Leu Cys Trp Gly Tyr Trp Ser Leu Gly Gln Pro Gly Ile Ser Thr
1               5                   10                  15

Asn Leu Gln Gly Ile Val Ala Glu Pro Gln Val Cys Gly Phe Ile Ser
              20                  25                  30

Asp Arg Ser Val Lys Glu Val Ala Cys Gly Gly Asn His Ser Val Phe
              35                  40                  45

Leu Leu Glu Asp Gly Glu Val Tyr Thr Cys Gly Leu Asn Thr Lys Gly
              50                  55                  60

Gln Leu Gly His Glu Arg Glu Gly Asn Lys Pro Glu Gln Ile Gly Ala
65                  70                  75                  80

Leu Ala Asp Gln His Ile Ile His Val Ala Cys Gly Glu Ser His Ser
              85                  90                  95

Leu Ala Leu Ser Asp Arg Gly Gln Leu Phe Ser Trp Gly Ala Gly Ser
              100                 105                 110

Asp Gly Gln Leu Gly Leu Met Thr Thr Glu Asp Ser Val Ala Val Pro
```

                    115   120   125

    Arg Leu Ile Gln Lys Leu Asn Gln Gln Thr Ile Leu Gln Val Ser Cys
            130   135   140

    Gly Asn Trp His Cys Leu Ala Leu Ala Ala Asp Gly Gln Phe Phe Thr
        145   150   155   160

    Trp Gly Lys Asn Ser His Gly Gln Leu Gly Leu Gly Lys Glu Phe Pro
                    165   170   175

    Ser Gln Ala Ser Pro Gln Arg Val Arg Ser Leu Glu Gly Ile Pro Leu
                180   185   190

    Ala Gln Val Ala Ala Gly Gly Ala His Ser Phe Ala Leu Ser Leu Ser
            195   200   205

    Gly Ala Val Phe Gly Trp Gly Met Asn Asn Ala Gly Gln Leu Gly Leu
        210   215   220

    Ser Asp Glu Lys Asp Arg Glu Ser Pro Cys His Val Lys Leu Leu Arg
    225   230   235   240

    Thr Gln Lys Val Val Tyr Ile Ser Cys Gly Glu Glu His Thr Ala Val
                    245   250   255

    Leu Thr Lys Ser Gly Gly Val Phe Thr Phe Gly Ala Gly Ser Cys Gly
            260   265   270

    Gln Leu Gly His Asp Ser Met Asn Asp Glu Val Asn Pro Arg Arg Val
        275   280   285

    Leu Glu Leu Met Gly Ser Glu Val Thr Gln Ile Ala Cys Gly Arg Gln
        290   295   300

    His Thr Leu Ala Phe Val Pro Ser Ser Gly Leu Ile Tyr Ala Phe Gly
    305   310   315   320

    Cys Gly Ala Arg Gly Gln Leu Gly Thr Gly His Thr Cys Asn Val Lys
                    325   330   335

    Cys Pro Ser Pro Val Lys Gly Tyr Trp Ala Ala His Ser Gly Gln Leu
                340   345   350

    Ser Ala Arg Ala Asp Arg Phe Lys Tyr His Ile Val Lys Gln Ile Phe
                355   360   365

                                    982

```
Ser Gly Gly Asp Gln Thr Phe Val Leu Cys Ser Lys Tyr Glu Asn Tyr
    370             375             380

Ser Pro Ala Val Asp Phe Arg Thr Met Asn Gln Ala His Tyr Thr Ser
385             390             395             400

Leu Ile Asn Asp Glu Thr Ile Ala Val Trp Arg Gln Lys Leu Ser Glu
            405             410             415

His Asn Asn Ala Asn Thr Ile Asn Gly Val Val Gln Ile Leu Ser Ser
            420             425             430

Ala Ala Cys Trp Asn Gly Ser Phe Leu Glu Lys Lys Ile Asp Glu His
        435             440             445

Phe Lys Thr Ser Pro Lys Ile Pro Gly Ile Asp Leu Asn Ser Thr Arg
    450             455             460

Val Leu Phe Glu Lys Leu Met Asn Ser Gln His Ser Met Ile Leu Glu
465             470             475             480

Gln Ile Leu Asn Ser Phe Glu Ser Cys Leu Ile Pro Gln Leu Ser Ser
            485             490             495

Ser Pro Pro Asp Val Glu Ala Met Arg Ile Tyr Leu Ile Leu Pro Glu
        500             505             510

Phe Pro Leu Leu Gln Asp Ser Lys Tyr Tyr Ile Thr Leu Thr Ile Pro
    515             520             525

Leu Ala Met Ala Ile Leu Arg Leu Asp Thr Asn Pro Ser Lys Val Leu
    530             535             540

Asp Asn Trp Trp Ser Gln Val Cys Pro Lys Tyr Phe Met Lys Leu Val
545             550             555             560

Asn Leu Tyr Lys Gly Ala Val Leu Tyr Leu Leu Arg Gly Arg Lys Thr
            565             570             575

Phe Leu Ile Pro Val Leu Phe Asn Asn Tyr Ile Thr Ala Ala Leu Lys
            580             585             590

Leu Leu Glu Lys Leu Tyr Lys Val Asn Leu Lys Val Lys His Val Glu
        595             600             605
```

983

```
Tyr Asp Thr Phe Tyr Ile Pro Glu Ile Ser Asn Leu Val Asp Ile Gln
    610             615             620

Glu Asp Tyr Leu Met Trp Phe Leu His Gln Ala Gly Met Lys Ala Arg
625             630             635             640

Pro Ser Ile Ile Gln Asp Thr Val Thr Leu Cys Ser Tyr Pro Phe Ile
            645             650             655

Phe Asp Ala Gln Ala Lys Thr Lys Met Leu Gln Thr Asp Ala Glu Leu
            660             665             670

Gln Met Gln Val Ala Val Asn Gly Ala Asn Leu Gln Asn Val Phe Met
        675             680             685

Leu Leu Thr Leu Glu Pro Leu Leu Ala Arg Ser Pro Phe Leu Val Leu
    690             695             700

His Val Arg Arg Asn Asn Leu Val Gly Asp Ala Leu Arg Glu Leu Ser
705             710             715             720

Ile His Ser Asp Ile Asp Leu Lys Lys Pro Leu Lys Val Ile Phe Asp
            725             730             735

Gly Glu Glu Ala Val Asp Ala Gly Gly Val Thr Lys Glu Phe Phe Leu
        740             745             750

Leu Leu Leu Lys Glu Leu Leu Asn Pro Ile Tyr Gly Met Phe Thr Tyr
    755             760             765

Tyr Gln Asp Ser Asn Leu Leu Trp Phe Ser Asp Thr Cys Phe Val Glu
    770             775             780

His Asn Trp Phe His Leu Ile Gly Ile Thr Cys Gly Leu Ala Ile Tyr
785             790             795             800

Asn Ser Thr Val Val Asp Leu His Phe Pro Leu Ala Leu Tyr Lys Lys
            805             810             815

Leu Leu Asn Val Lys Pro Gly Leu Glu Asp Leu Lys Glu Leu Ser Pro
            820             825             830

Thr Glu Gly Arg Ser Leu Gln Glu Leu Leu Asp Tyr Pro Gly Glu Asp
        835             840             845
```

984

Val Glu Glu Thr Phe Cys Leu Asn Phe Thr Ile Cys Arg Glu Ser Tyr
    850   855   860

Gly Val Ile Glu Gln Lys Lys Leu Ile Pro Gly Gly Asp Asn Val Thr
865   870   875   880

Val Cys Lys Asp Asn Arg Gln Glu Phe Val Asp Ala Tyr Val Asn Tyr
            885   890   895

Val Phe Gln Ile Ser Val His Glu Trp Tyr Thr Ala Phe Ser Ser Gly
            900   905   910

Phe Leu Lys Val Cys Gly Gly Lys Val Leu Glu Leu Phe Gln Pro Ser
        915   920   925

Glu Leu Arg Ala Met Met Val Gly Asn Ser Asn Tyr Asn Trp Glu Glu
    930   935   940

Leu Glu Glu Thr Ala Ile Tyr Lys Gly Asp Tyr Ser Ala Thr His Pro
945   950   955   960

Thr Val Lys Leu Phe Trp Glu Thr Phe His Glu Phe Pro Leu Glu Lys
            965   970   975

Lys Lys Lys Phe Leu Leu Phe Leu Thr Gly Ser Asp Arg Ile Pro Ile
        980   985   990

Tyr Gly Met Ala Ser Leu Gln Ile Val Ile Gln Ser Thr Ala Ser Gly
        995   1000   1005

Glu Glu Tyr Leu Pro Val Ala His Thr Cys Tyr Asn Leu Leu Asp
    1010   1015   1020

Leu Pro Lys Tyr Ser Ser Lys Glu Ile Leu Ser Ala Arg Leu Thr
    1025   1030   1035

Gln Ala Leu Asp Asn Tyr Glu Gly Phe Ser Leu Ala
    1040   1045   1050

<210> 2574
<211> 369
<212> PRT
<213> Homo sapiens

<400> 2574

Met Arg Ala Cys Ile Ser Leu Val Leu Ala Val Leu Cys Gly Leu Ala
1   5   10   15

Trp Ala Glu Asp His Lys Glu Ser Glu Pro Leu Pro Gln Leu Glu Glu
             20   25   30

Glu Thr Glu Glu Ala Leu Ala Ser Asn Leu Tyr Ser Ala Pro Thr Ser
             35   40   45

Cys Gln Gly Arg Cys Tyr Glu Ala Phe Asp Lys His His Gln Cys His
     50   55   60

Cys Asn Ala Arg Cys Gln Glu Phe Gly Asn Cys Cys Lys Asp Phe Glu
65   70   75   80

Ser Leu Cys Ser Asp His Glu Val Ser His Ser Ser Asp Ala Ile Thr
             85   90   95

Lys Glu Glu Ile Gln Ser Ile Ser Glu Lys Ile Tyr Arg Ala Asp Thr
             100   105   110

Asn Lys Ala Gln Lys Glu Asp Ile Val Leu Asn Ser Gln Asn Cys Ile
     115   120   125

Ser Pro Ser Glu Thr Arg Asn Gln Val Asp Arg Cys Pro Lys Pro Leu
     130   135   140

Phe Thr Tyr Val Asn Glu Lys Leu Phe Ser Lys Pro Thr Tyr Ala Ala
145   150   155   160

Phe Ile Asn Leu Leu Asn Asn Tyr Gln Arg Ala Thr Gly His Gly Glu
             165   170   175

His Phe Ser Ala Gln Glu Leu Ala Glu Gln Asp Ala Phe Leu Arg Glu
     180   185   190

Ile Met Lys Thr Ala Val Met Lys Glu Leu Tyr Ser Phe Leu His His
     195   200   205

Gln Asn Arg Tyr Gly Ser Glu Gln Glu Phe Val Asp Asp Leu Lys Asn
     210   215   220

Met Trp Phe Gly Leu Tyr Ser Arg Gly Asn Glu Glu Gly Asp Ser Ser
225   230   235   240

Gly Phe Glu His Val Phe Ser Gly Glu Val Lys Lys Gly Lys Val Thr
             245   250   255

986

Gly Phe His Asn Trp Ile Arg Phe Tyr Leu Glu Glu Lys Glu Gly Leu
            260   265   270

Val Asp Tyr Tyr Ser His Ile Tyr Asp Gly Pro Trp Asp Ser Tyr Pro
            275   280   285

Asp Val Leu Ala Met Gln Phe Asn Trp Asp Gly Tyr Tyr Lys Glu Val
    290   295   300

Gly Ser Ala Phe Ile Gly Ser Ser Pro Glu Phe Glu Phe Ala Leu Tyr
305   310   315   320

Ser Leu Cys Phe Ile Ala Arg Pro Gly Lys Val Cys Gln Leu Ser Leu
            325   330   335

Gly Gly Tyr Pro Leu Ala Val Arg Thr Tyr Thr Trp Asp Lys Ser Thr
            340   345   350

Tyr Gly Asn Gly Lys Lys Tyr Ile Ala Thr Ala Tyr Ile Val Ser Ser
            355   360   365

Thr

<210>   2575
<211>   90
<212>   PRT
<213>   Homo sapiens

<400>   2575

Met Asp Pro Leu Arg Ala Gln Gln Leu Ala Ala Glu Leu Glu Val Glu
1   5   10   15

Met Met Ala Asp Met Tyr Asn Arg Met Thr Ser Ala Cys His Arg Lys
            20   25   30

Cys Val Pro Pro His Tyr Lys Glu Ala Glu Leu Ser Lys Gly Glu Ser
            35   40   45

Val Cys Leu Asp Arg Cys Val Ser Lys Tyr Leu Asp Ile His Glu Arg
    50   55   60

Met Gly Lys Lys Leu Thr Glu Leu Ser Met Gln Asp Glu Glu Leu Met
65   70   75   80

Lys Arg Val Gln Gln Ser Ser Gly Pro Ala

                        85   90

<210>   2576
<211>   426
<212>   PRT
<213>   Homo sapiens

<400>   2576

Met Ala Asn Asp Ser Gly Gly Pro Gly Gly Pro Ser Pro Ser Glu Arg
1   5   10   15

Asp Arg Gln Tyr Cys Glu Leu Cys Gly Lys Met Glu Asn Leu Leu Arg
                20   25   30

Cys Ser Arg Cys Arg Ser Ser Phe Tyr Cys Cys Lys Glu His Gln Arg
            35   40   45

Gln Asp Trp Lys Lys His Lys Leu Val Cys Gln Gly Ser Glu Gly Ala
        50   55   60

Leu Gly His Gly Val Gly Pro His Gln His Ser Gly Pro Ala Pro Pro
65   70   75   80

Ala Ala Val Pro Pro Pro Arg Ala Gly Ala Arg Glu Pro Arg Lys Ala
                85   90   95

Ala Ala Arg Arg Asp Asn Ala Ser Gly Asp Ala Ala Lys Gly Lys Val
            100   105   110

Lys Ala Lys Pro Pro Ala Asp Pro Ala Ala Ala Ala Ser Pro Cys Arg
            115   120   125

Ala Ala Ala Gly Gly Gln Gly Ser Ala Val Ala Ala Glu Ala Glu Pro
        130   135   140

Gly Lys Glu Glu Pro Pro Ala Arg Ser Ser Leu Phe Gln Glu Lys Ala
145   150   155   160

Asn Leu Tyr Pro Pro Ser Asn Thr Pro Gly Asp Ala Leu Ser Pro Gly
                165   170   175

Gly Gly Leu Arg Pro Asn Gly Gln Thr Lys Pro Leu Pro Ala Leu Lys
            180   185   190

Leu Ala Leu Glu Tyr Ile Val Pro Cys Met Asn Lys His Gly Ile Cys
        195   200   205

```
Val Val Asp Asp Phe Leu Gly Lys Glu Thr Gly Gln Gln Ile Gly Asp
    210             215             220

Glu Val Arg Ala Leu His Asp Thr Gly Lys Phe Thr Asp Gly Gln Leu
225             230             235             240

Val Ser Gln Lys Ser Asp Ser Ser Lys Asp Ile Arg Gly Asp Lys Ile
            245             250             255

Thr Trp Ile Glu Gly Lys Glu Pro Gly Cys Glu Thr Ile Gly Leu Leu
            260             265             270

Met Ser Ser Met Asp Asp Leu Ile Arg His Cys Asn Gly Lys Leu Gly
        275             280             285

Ser Tyr Lys Ile Asn Gly Arg Thr Lys Ala Met Val Ala Cys Tyr Pro
    290             295             300

Gly Asn Gly Thr Gly Tyr Val Arg His Val Asp Asn Pro Asn Gly Asp
305             310             315             320

Gly Arg Cys Val Thr Cys Ile Tyr Tyr Leu Asn Lys Asp Trp Asp Ala
            325             330             335

Lys Val Ser Gly Gly Ile Leu Arg Ile Phe Pro Glu Gly Lys Ala Gln
            340             345             350

Phe Ala Asp Ile Glu Pro Lys Phe Asp Arg Leu Leu Phe Phe Trp Ser
        355             360             365

Asp Arg Arg Asn Pro His Glu Val Gln Pro Ala Tyr Ala Thr Arg Tyr
    370             375             380

Ala Ile Thr Val Trp Tyr Phe Asp Ala Asp Glu Arg Ala Arg Ala Lys
385             390             395             400

Val Lys Tyr Leu Thr Gly Glu Lys Gly Val Arg Val Glu Leu Asn Lys
            405             410             415

Pro Ser Asp Ser Val Gly Lys Asp Val Phe
            420             425
```

<210> 2577
<211> 346
<212> PRT
<213> Homo sapiens

<400> 2577

```
Met Glu Ser Val Ser Cys Ser Ala Ala Ala Val Arg Thr Gly Asp Met
1               5               10              15


Glu Ser Gln Arg Asp Leu Ser Leu Val Pro Glu Arg Leu Gln Arg Arg
            20              25              30


Glu Gln Glu Arg Gln Leu Glu Val Glu Arg Arg Lys Gln Lys Arg Gln
            35              40              45


Asn Gln Glu Val Glu Lys Glu Asn Ser His Phe Phe Val Ala Thr Phe
    50              55              60


Ala Arg Glu Arg Ala Ala Val Glu Glu Leu Leu Glu Arg Ala Glu Ser
65              70              75              80


Val Glu Arg Leu Glu Glu Ala Ala Ser Arg Leu Gln Gly Leu Gln Lys
            85              90              95


Leu Ile Asn Asp Ser Val Phe Phe Leu Ala Ala Tyr Asp Leu Arg Gln
            100             105             110


Gly Gln Glu Ala Leu Ala Arg Leu Gln Ala Ala Leu Ala Glu Arg Arg
        115             120             125


Arg Gly Leu Gln Pro Lys Lys Arg Phe Ala Phe Lys Thr Arg Gly Lys
    130             135             140


Asp Ala Ala Ser Ser Thr Lys Val Asp Ala Ala Pro Gly Ile Pro Pro
145             150             155             160


Ala Val Glu Ser Ile Gln Asp Ser Pro Leu Pro Lys Lys Ala Glu Gly
            165             170             175


Asp Leu Gly Pro Ser Trp Val Cys Gly Phe Ser Asn Leu Glu Ser Gln
            180             185             190


Val Leu Glu Lys Arg Ala Ser Glu Leu His Gln Arg Asp Val Leu Leu
    195             200             205


Thr Glu Leu Ser Asn Cys Thr Val Arg Leu Tyr Gly Asn Pro Asn Thr
    210             215             220


Leu Arg Leu Thr Lys Ala His Ser Cys Lys Leu Leu Cys Gly Pro Val
225             230             235             240
```

```
Ser Thr Ser Val Phe Leu Glu Asp Cys Ser Asp Cys Val Leu Ala Val
            245                 250                 255

Ala Cys Gln Gln Leu Arg Ile His Ser Thr Lys Asp Thr Arg Ile Phe
            260                 265                 270

Leu Gln Val Thr Ser Arg Ala Ile Val Glu Asp Cys Ser Gly Ile Gln
            275                 280                 285

Phe Ala Pro Tyr Thr Trp Ser Tyr Pro Glu Ile Asp Lys Asp Phe Glu
        290                 295                 300

Ser Ser Gly Leu Asp Arg Ser Lys Asn Asn Trp Asn Asp Val Asp Asp
305                 310                 315                 320

Phe Asn Trp Leu Ala Arg Asp Met Ala Ser Pro Asn Trp Ser Ile Leu
                325                 330                 335

Pro Glu Glu Glu Arg Asn Ile Gln Trp Asp
            340                 345
```

```
<210>  2578
<211>  247
<212>  PRT
<213>  Homo sapiens

<400>  2578
```

```
Met Glu Phe Pro Lys Met Leu Thr Arg Lys Ile Lys Leu Trp Asp Ile
1             5               10                  15

Asn Ala His Ile Thr Cys Arg Leu Cys Ser Gly Tyr Leu Ile Asp Ala
            20                  25                  30

Thr Thr Val Thr Glu Cys Leu His Thr Phe Cys Arg Ser Cys Leu Val
        35                  40                  45

Lys Tyr Leu Glu Glu Asn Asn Thr Cys Pro Thr Cys Arg Ile Val Ile
    50                  55                  60

His Gln Ser His Pro Leu Gln Tyr Ile Gly His Asp Arg Thr Met Gln
65                  70                  75                  80

Asp Ile Val Tyr Lys Leu Val Pro Gly Leu Gln Glu Ala Glu Met Arg
                85                  90                  95
```

Lys Gln Arg Glu Phe Tyr His Lys Leu Gly Met Glu Val Pro Gly Asp
            100   105   110

Ile Lys Gly Glu Thr Cys Ser Ala Lys Gln His Leu Asp Ser His Arg
            115   120   125

Asn Gly Glu Thr Lys Ala Asp Asp Ser Ser Asn Lys Glu Ala Ala Glu
            130   135   140

Glu Lys Pro Glu Glu Asp Asn Asp Tyr His Arg Ser Asp Glu Gln Val
145   150   155   160

Ser Ile Cys Leu Glu Cys Asn Ser Ser Lys Leu Arg Gly Leu Lys Arg
            165   170   175

Lys Trp Ile Arg Cys Ser Ala Gln Ala Thr Val Leu His Leu Lys Lys
            180   185   190

Phe Ile Ala Lys Lys Leu Asn Leu Ser Ser Phe Asn Glu Leu Asp Ile
            195   200   205

Leu Cys Asn Glu Glu Ile Leu Gly Lys Asp His Thr Leu Lys Phe Val
    210   215   220

Val Val Thr Arg Trp Arg Phe Lys Lys Ala Pro Leu Leu Leu His Tyr
225   230   235   240

Arg Pro Lys Met Asp Leu Leu
                245

<210> 2579
<211> 360
<212> PRT
<213> Homo sapiens

<400> 2579

Met Ala Ser Ala Thr Ala Pro Ala Ala Ala Val Pro Thr Leu Ala Ser
1   5   10   15

Pro Leu Glu Gln Leu Arg His Leu Ala Glu Glu Leu Arg Leu Leu Leu
            20   25   30

Pro Arg Val Arg Val Gly Glu Ala Gln Glu Thr Thr Glu Glu Phe Asn
            35   40   45

Arg Glu Met Phe Trp Arg Arg Leu Asn Glu Ala Ala Val Thr Val Ser
    50   55   60

Arg Glu Ala Thr Thr Leu Thr Ile Val Phe Ser Gln Leu Pro Leu Pro
65   70   75   80

Ser Pro Gln Glu Thr Gln Lys Phe Cys Glu Gln Val His Ala Ala Ile
                85   90   95

Lys Ala Phe Ile Ala Val Tyr Tyr Leu Leu Pro Lys Asp Gln Gly Ile
            100   105   110

Thr Leu Arg Lys Leu Val Arg Gly Ala Thr Leu Asp Ile Val Asp Gly
        115   120   125

Met Ala Gln Leu Met Glu Val Leu Ser Val Thr Pro Thr Gln Ser Pro
    130   135   140

Glu Asn Asn Asp Leu Ile Ser Tyr Asn Ser Val Trp Val Ala Cys Gln
145   150   155   160

Gln Met Pro Gln Ile Pro Arg Asp Asn Lys Ala Ala Ala Leu Leu Met
            165   170   175

Leu Thr Lys Asn Val Asp Phe Val Lys Asp Ala His Glu Glu Met Glu
        180   185   190

Gln Ala Val Glu Glu Cys Asp Pro Tyr Ser Gly Leu Leu Asn Asp Thr
        195   200   205

Glu Glu Asn Asn Ser Asp Asn His Asn His Glu Asp Asp Val Leu Gly
    210   215   220

Phe Pro Ser Asn Gln Asp Leu Tyr Trp Ser Glu Asp Asp Gln Glu Leu
225   230   235   240

Ile Ile Pro Cys Leu Ala Leu Val Arg Ala Ser Lys Ala Cys Leu Lys
            245   250   255

Lys Ile Arg Met Leu Val Ala Glu Asn Gly Lys Lys Asp Gln Val Ala
            260   265   270

Gln Met Ala Asp Ile Val Asp Ile Ser Asp Glu Ile Ser Pro Ser Val
    275   280   285

Asp Asp Leu Ala Leu Ser Ile Tyr Pro Pro Met Cys His Leu Thr Val
    290   295   300

Arg Ile Asn Ser Ala Lys Leu Val Ser Val Leu Lys Lys Ala Leu Glu
305   310   315   320

Ile Thr Lys Ala Ser His Val Thr Pro Gln Pro Glu Asp Ser Trp Ile
                325   330   335

Pro Leu Leu Ile Asn Ala Ile Asp His Cys Met Asn Arg Ile Lys Glu
            340   345   350

Leu Thr Gln Ser Glu Leu Glu Leu
        355   360

<210> 2580
<211> 412
<212> PRT
<213> Homo sapiens

<400> 2580

Met Ala Glu Asn Leu Lys Gly Cys Ser Val Cys Cys Lys Ser Ser Trp
1   5   10   15

Asn Gln Leu Gln Asp Leu Cys Arg Leu Ala Lys Leu Ser Cys Pro Ala
        20   25   30

Leu Gly Ile Ser Lys Arg Asn Leu Tyr Asp Phe Glu Val Glu Tyr Leu
        35   40   45

Cys Asp Tyr Lys Lys Ile Arg Glu Gln Glu Tyr Tyr Leu Val Lys Trp
    50   55   60

Arg Gly Tyr Pro Asp Ser Glu Ser Thr Trp Glu Pro Arg Gln Asn Leu
65   70   75   80

Lys Cys Val Arg Ile Leu Lys Gln Phe His Lys Asp Leu Glu Arg Glu
                85   90   95

Leu Leu Arg Arg His His Arg Ser Lys Thr Pro Arg His Leu Asp Pro
        100   105   110

Ser Leu Ala Asn Tyr Leu Val Gln Lys Ala Lys Gln Arg Arg Ala Leu
        115   120   125

Arg Arg Trp Glu Gln Glu Leu Asn Ala Lys Arg Ser His Leu Gly Arg
        130   135   140

Ile Thr Val Glu Asn Glu Val Asp Leu Asp Gly Pro Pro Arg Ala Phe

994

145   150   155   160

Val Tyr Ile Asn Glu Tyr Arg Val Gly Glu Gly Ile Thr Leu Asn Gln
                165   170   175

Val Ala Val Gly Cys Glu Cys Gln Asp Cys Leu Trp Ala Pro Thr Gly
                180   185   190

Gly Cys Cys Pro Gly Ala Ser Leu His Lys Phe Ala Tyr Asn Asp Gln
                195   200   205

Gly Gln Val Arg Leu Arg Ala Gly Leu Pro Ile Tyr Glu Cys Asn Ser
        210   215   220

Arg Cys Arg Cys Gly Tyr Asp Cys Pro Asn Arg Val Val Gln Lys Gly
225   230   235   240

Ile Arg Tyr Asp Leu Cys Ile Phe Arg Thr Asp Asp Gly Arg Gly Trp
                245   250   255

Gly Val Arg Thr Leu Glu Lys Ile Arg Lys Asn Ser Phe Val Met Glu
                260   265   270

Tyr Val Gly Glu Ile Ile Thr Ser Glu Glu Ala Glu Arg Arg Gly Gln
                275   280   285

Ile Tyr Asp Arg Gln Gly Ala Thr Tyr Leu Phe Asp Leu Asp Tyr Val
        290   295   300

Glu Asp Val Tyr Thr Val Asp Ala Ala Tyr Tyr Gly Asn Ile Ser His
305   310   315   320

Phe Val Asn His Ser Cys Asp Pro Asn Leu Gln Val Tyr Asn Val Phe
                325   330   335

Ile Asp Asn Leu Asp Glu Arg Leu Pro Arg Ile Ala Phe Phe Ala Thr
                340   345   350

Arg Thr Ile Arg Ala Gly Glu Glu Leu Thr Phe Asp Tyr Asn Met Gln
                355   360   365

Val Asp Pro Val Asp Met Glu Ser Thr Arg Met Asp Ser Asn Phe Gly
        370   375   380

Leu Ala Gly Leu Pro Gly Ser Pro Lys Lys Arg Val Arg Ile Glu Cys
385   390   395   400

Lys Cys Gly Thr Glu Ser Cys Arg Lys Tyr Leu Phe
            405   410

<210> 2581
<211> 110
<212> PRT
<213> Homo sapiens

<400> 2581

Met Val Tyr Glu Arg Ala Gly Glu Ala Val Pro Pro Arg Gly Leu Arg
1   5   10   15

Glu Lys Phe Pro Arg Ala Leu Phe Gly Trp Ala Gly Glu Arg Pro Ser
            20   25   30

Ala Leu Cys Ala Ser Asn Pro Pro Gln Leu Ser Cys Ser Gly Arg Gly
        35   40   45

Ala Arg Tyr Phe Arg Leu Gly Glu Val Leu Gly Thr Asp Val Gly Ser
    50   55   60

Ser Val Gly Asp Phe Ser Gly Phe Trp Pro Phe Gln Thr Leu Val Ile
65   70   75   80

Val Phe Ser Val Gln Ser Ser Phe Gly Val Trp Gly Phe Pro Ser Ser
                85   90   95

Cys Ala Arg His Arg Glu Ala Trp Pro Glu Gly Pro Val Ser
            100   105   110

<210> 2582
<211> 471
<212> PRT
<213> Homo sapiens

<400> 2582

Met Pro Asn Ser Glu Pro Ala Ser Leu Leu Glu Leu Phe Asn Ser Ile
1   5   10   15

Ala Thr Gln Gly Glu Leu Val Arg Ser Leu Lys Ala Gly Asn Ala Ser
            20   25   30

Lys Asp Glu Ile Asp Ser Ala Val Lys Met Leu Val Ser Leu Lys Met
        35   40   45

Ser Tyr Lys Ala Ala Ala Gly Glu Asp Tyr Lys Ala Asp Cys Pro Pro

                50   55   60

Gly Asn Pro Ala Pro Thr Ser Asn His Gly Pro Asp Ala Thr Glu Ala
65   70   75   80

Glu Glu Asp Phe Val Asp Pro Trp Thr Val Gln Thr Ser Ser Ala Lys
                85   90   95

Gly Ile Asp Tyr Asp Lys Leu Ile Val Arg Phe Gly Ser Ser Lys Ile
                100   105   110

Asp Lys Glu Leu Ile Asn Arg Ile Glu Arg Ala Thr Gly Gln Arg Pro
            115   120   125

His His Phe Leu Arg Arg Gly Ile Phe Phe Ser His Arg Asp Met Asn
        130   135   140

Gln Val Leu Asp Ala Tyr Glu Asn Lys Lys Pro Phe Tyr Leu Tyr Thr
145   150   155   160

Gly Arg Gly Pro Ser Ser Glu Ala Met His Val Gly His Leu Ile Pro
                165   170   175

Phe Ile Phe Thr Lys Trp Leu Gln Asp Val Phe Asn Val Pro Leu Val
            180   185   190

Ile Gln Met Thr Asp Asp Glu Lys Tyr Leu Trp Lys Asp Leu Thr Leu
            195   200   205

Asp Gln Ala Tyr Gly Asp Ala Val Glu Asn Ala Lys Asp Ile Ile Ala
    210   215   220

Cys Gly Phe Asp Ile Asn Lys Thr Phe Ile Phe Ser Asp Leu Asp Tyr
225   230   235   240

Met Gly Met Ser Ser Gly Phe Tyr Lys Asn Val Val Lys Ile Gln Lys
                245   250   255

His Val Thr Phe Asn Gln Val Lys Gly Ile Phe Gly Phe Thr Asp Ser
            260   265   270

Asp Cys Ile Gly Lys Ile Ser Phe Pro Ala Ile Gln Ala Ala Pro Ser
        275   280   285

Phe Ser Asn Ser Phe Pro Gln Ile Phe Arg Asp Arg Thr Asp Ile Gln
    290   295   300

Cys Leu Ile Pro Cys Ala Ile Asp Gln Asp Pro Tyr Phe Arg Met Thr
305   310   315   320

Arg Asp Val Ala Pro Arg Ile Gly Tyr Pro Lys Pro Ala Leu Leu His
              325   330   335

Ser Thr Phe Phe Pro Ala Leu Gln Gly Ala Gln Thr Lys Met Ser Ala
          340   345   350

Ser Asp Pro Asn Ser Ser Ile Phe Leu Thr Asp Thr Ala Lys Gln Ile
          355   360   365

Lys Thr Lys Val Asn Lys His Ala Phe Ser Gly Gly Arg Asp Thr Ile
    370   375   380

Glu Glu His Arg Gln Phe Gly Gly Asn Cys Asp Val Asp Val Ser Phe
385   390   395   400

Met Tyr Leu Thr Phe Phe Leu Glu Asp Asp Asp Lys Leu Glu Gln Ile
          405   410   415

Arg Lys Asp Tyr Thr Ser Gly Ala Met Leu Thr Gly Glu Leu Lys Lys
          420   425   430

Ala Leu Ile Glu Val Leu Gln Pro Leu Ile Ala Glu His Gln Ala Arg
    435   440   445

Arg Lys Glu Val Thr Asp Glu Ile Val Lys Glu Phe Met Thr Pro Arg
    450   455   460

Lys Leu Ser Phe Asp Phe Gln
465   470

<210> 2583
<211> 392
<212> PRT
<213> Homo sapiens

<400> 2583

Met Gly Ser Leu Ser Thr Ala Asn Val Glu Phe Cys Leu Asp Val Phe
1   5   10   15

Lys Glu Leu Asn Ser Asn Asn Ile Gly Asp Asn Ile Phe Phe Ser Ser
          20   25   30

```
Leu Ser Leu Leu Tyr Ala Leu Ser Met Val Leu Leu Gly Ala Arg Gly
        35              40              45

Glu Thr Ala Glu Gln Leu Glu Lys Val Leu His Phe Ser His Thr Val
        50              55              60

Asp Ser Leu Lys Pro Gly Phe Lys Asp Ser Pro Lys Cys Ser Gln Ala
65              70              75              80

Gly Arg Ile His Ser Glu Phe Gly Val Glu Phe Ser Gln Ile Asn Gln
                85              90              95

Pro Asp Ser Asn Cys Thr Leu Ser Ile Ala Asn Arg Leu Tyr Gly Thr
            100             105             110

Lys Thr Met Ala Phe His Gln Gln Tyr Leu Ser Cys Ser Glu Lys Trp
        115             120             125

Tyr Gln Ala Arg Leu Gln Thr Val Asp Phe Glu Gln Ser Thr Glu Glu
    130             135             140

Thr Arg Lys Met Ile Asn Ala Trp Val Glu Asn Lys Thr Asn Gly Lys
145             150             155             160

Val Ala Asn Leu Phe Gly Lys Ser Thr Ile Asp Pro Ser Ser Val Met
                165             170             175

Val Leu Val Asn Thr Ile Tyr Phe Lys Gly Gln Arg Gln Asn Lys Phe
            180             185             190

Gln Val Arg Glu Thr Val Lys Ser Pro Phe Gln Leu Ser Glu Gly Lys
        195             200             205

Asn Val Thr Val Glu Met Met Tyr Gln Ile Gly Thr Phe Lys Leu Ala
    210             215             220

Phe Val Lys Glu Pro Gln Met Gln Val Leu Glu Leu Pro Tyr Val Asn
225             230             235             240

Asn Lys Leu Ser Met Ile Ile Leu Leu Pro Val Gly Ile Ala Asn Leu
            245             250             255

Lys Gln Ile Glu Lys Gln Leu Asn Ser Gly Thr Phe His Glu Trp Thr
        260             265             270

Ser Ser Ser Asn Met Met Glu Arg Glu Val Glu Val His Leu Pro Arg
```

```
        275                    280                    285


Phe Lys Leu Glu Ile Lys Tyr Glu Leu Asn Ser Leu Leu Lys Pro Leu
    290                    295                300

Gly Val Thr Asp Leu Phe Asn Gln Val Lys Ala Asp Leu Ser Gly Met
305                    310                315                320

Ser Pro Thr Lys Gly Leu Tyr Leu Ser Lys Ala Ile His Lys Ser Tyr
                325                    330                335

Leu Asp Val Ser Glu Glu Gly Thr Glu Ala Ala Ala Ala Thr Gly Asp
                340                    345                350

Ser Ile Ala Val Lys Ser Leu Pro Met Arg Ala Gln Phe Lys Ala Asn
            355                    360                365

His Pro Phe Leu Phe Phe Ile Arg His Thr His Thr Asn Thr Ile Leu
    370                    375                380

Phe Cys Gly Lys Leu Ala Ser Pro
385                    390


<210>  2584
<211>  811
<212>  PRT
<213>  Homo sapiens

<400>  2584

Met Pro Leu Ser Ser Pro Asn Ala Ala Thr Ala Ser Asp Met Asp
1               5                10                15

Lys Asn Ser Gly Ser Asn Ser Ser Ser Ala Ser Ser Gly Ser Ser Lys
            20                    25                30

Gly Gln Gln Pro Pro Arg Ser Ala Ser Ala Gly Pro Ala Gly Glu Ser
            35                    40                45

Lys Pro Lys Ser Asp Gly Lys Asn Ser Ser Gly Ser Lys Arg Tyr Asn
        50                    55                60

Arg Lys Arg Glu Leu Ser Tyr Pro Lys Asn Glu Ser Phe Asn Asn Gln
65                    70                75                80

Ser Arg Arg Ser Ser Ser Gln Lys Ser Lys Thr Phe Asn Lys Met Pro
                85                    90                95
```

```
Pro Gln Arg Gly Gly Gly Ser Ser Lys Leu Phe Ser Ser Ser Phe Asn
            100               105               110


Gly Gly Arg Arg Asp Glu Val Ala Glu Ala Gln Arg Ala Glu Phe Ser
            115               120               125


Pro Ala Gln Phe Ser Gly Pro Lys Lys Ile Asn Leu Asn His Leu Leu
    130               135               140


Asn Phe Thr Phe Glu Pro Arg Gly Gln Thr Gly His Phe Glu Gly Ser
145               150               155               160


Gly His Gly Ser Trp Gly Lys Arg Asn Lys Trp Gly His Lys Pro Phe
                165               170               175


Asn Lys Glu Leu Phe Leu Gln Ala Asn Cys Gln Phe Val Val Ser Glu
            180               185               190


Asp Gln Asp Tyr Thr Ala His Phe Ala Asp Pro Asp Thr Leu Val Asn
            195               200               205


Trp Asp Phe Val Glu Gln Val Arg Ile Cys Ser His Glu Val Pro Ser
    210               215               220


Cys Pro Ile Cys Leu Tyr Pro Pro Thr Ala Ala Lys Ile Thr Arg Cys
225               230               235               240


Gly His Ile Phe Cys Trp Ala Cys Ile Leu His Tyr Leu Ser Leu Ser
                245               250               255


Glu Lys Thr Trp Ser Lys Cys Pro Ile Cys Tyr Ser Ser Val His Lys
                260               265               270


Lys Asp Leu Lys Ser Val Val Ala Thr Glu Ser His Gln Tyr Val Val
            275               280               285


Gly Asp Thr Ile Thr Met Gln Leu Met Lys Arg Glu Lys Gly Val Leu
            290               295               300


Val Ala Leu Pro Lys Ser Lys Trp Met Asn Val Asp His Pro Ile His
305               310               315               320


Leu Gly Asp Glu Gln His Ser Gln Tyr Ser Lys Phe Leu Leu Ala Ser
                325               330               335
```

Lys Glu Gln Val Leu His Arg Val Val Leu Glu Glu Lys Val Ala Leu
            340   345   350

Glu Gln Gln Leu Ala Glu Glu Lys His Thr Pro Glu Ser Cys Phe Ile
            355   360   365

Glu Ala Ala Ile Gln Glu Leu Lys Thr Arg Glu Glu Ala Leu Ser Gly
    370   375   380

Leu Ala Gly Ser Arg Arg Glu Val Thr Gly Val Val Ala Ala Leu Glu
385   390   395   400

Gln Leu Val Leu Met Ala Pro Leu Ala Lys Glu Ser Val Phe Gln Pro
            405   410   415

Arg Lys Gly Val Leu Glu Tyr Leu Ser Ala Phe Asp Glu Glu Thr Thr
            420   425   430

Glu Val Cys Ser Leu Asp Thr Pro Ser Arg Pro Leu Ala Leu Pro Leu
            435   440   445

Val Glu Glu Glu Glu Ala Val Ser Glu Pro Glu Pro Glu Gly Leu Pro
    450   455   460

Glu Ala Cys Asp Asp Leu Glu Leu Ala Asp Asp Asn Leu Lys Glu Gly
465   470   475   480

Thr Ile Cys Thr Glu Ser Ser Gln Gln Glu Pro Ile Thr Lys Ser Gly
            485   490   495

Phe Thr Arg Leu Ser Ser Ser Pro Cys Tyr Tyr Phe Tyr Gln Ala Glu
            500   505   510

Asp Gly Gln His Met Phe Leu His Pro Val Asn Val Arg Cys Leu Val
            515   520   525

Arg Glu Tyr Gly Ser Leu Glu Arg Ser Pro Glu Lys Ile Ser Ala Thr
    530   535   540

Val Val Glu Ile Ala Gly Tyr Ser Met Ser Glu Asp Val Arg Gln Arg
545   550   555   560

His Arg Tyr Leu Ser His Leu Pro Leu Thr Cys Glu Phe Ser Ile Cys
            565   570   575

Glu Leu Ala Leu Gln Pro Pro Val Val Ser Lys Glu Thr Leu Glu Met

1002

```
                  580                      585                        590

    Phe Ser Asp Asp Ile Glu Lys Arg Lys Arg Gln Arg Gln Lys Lys Ala
            595                 600                 605

    Arg Glu Glu Arg Arg Arg Glu Arg Arg Ile Glu Ile Glu Glu Asn Lys
            610             615                 620

    Lys Gln Gly Lys Tyr Pro Glu Val His Ile Pro Leu Glu Asn Leu Gln
    625                 630                 635                 640

    Gln Phe Pro Ala Phe Asn Ser Tyr Thr Cys Ser Ser Asp Ser Ala Leu
                    645                 650                 655

    Gly Pro Thr Ser Thr Glu Gly His Gly Ala Leu Ser Ile Ser Pro Leu
                660                 665                 670

    Ser Arg Ser Pro Gly Ser His Ala Asp Phe Leu Leu Thr Pro Leu Ser
            675                 680                 685

    Pro Thr Ala Ser Gln Gly Ser Pro Ser Phe Cys Val Gly Ser Leu Glu
        690                 695                 700

    Glu Asp Ser Pro Phe Pro Ser Phe Ala Gln Met Leu Arg Val Gly Lys
    705                 710                 715                 720

    Ala Lys Ala Asp Val Trp Pro Lys Thr Ala Pro Lys Lys Asp Glu Asn
                725                 730                 735

    Ser Leu Val Pro Pro Ala Pro Val Asp Ser Asp Gly Glu Ser Asp Asn
                740                 745                 750

    Ser Asp Arg Val Pro Val Pro Ser Phe Gln Asn Ser Phe Ser Gln Ala
            755                 760                 765

    Ile Glu Ala Ala Phe Met Lys Leu Asp Thr Pro Ala Thr Ser Asp Pro
        770                 775                 780

    Leu Ser Glu Glu Lys Gly Gly Lys Lys Arg Lys Lys Gln Lys Gln Lys
    785                 790                 795                 800

    Leu Leu Phe Ser Thr Ser Val Val His Thr Lys
                805                 810
```

```
<210>  2585
<211>  482
```

```
<212>   PRT
<213>   Homo sapiens

<400>   2585
```

```
Met Ala Glu Ala Ala Thr Pro Gly Thr Thr Ala Thr Thr Ser Gly Ala
1               5                   10                  15


Gly Ala Ala Ala Ala Thr Ala Ala Ala Ser Pro Thr Pro Ile Pro
            20                  25                  30


Thr Val Thr Ala Pro Ser Leu Gly Ala Gly Gly Gly Gly Gly Ser
        35                  40                  45


Asp Gly Ser Gly Gly Gly Trp Thr Lys Gln Val Thr Cys Arg Tyr Phe
    50                  55                  60


Met His Gly Val Cys Lys Glu Gly Asp Asn Cys Arg Tyr Ser His Asp
65              70                  75                  80


Leu Ser Asp Ser Pro Tyr Ser Val Val Cys Lys Tyr Phe Gln Arg Gly
                85                  90                  95


Tyr Cys Ile Tyr Gly Asp Arg Cys Arg Tyr Glu His Ser Lys Pro Leu
            100                 105                 110


Lys Gln Glu Glu Ala Thr Ala Thr Glu Leu Thr Thr Lys Ser Ser Leu
        115                 120                 125


Ala Ala Ser Ser Ser Leu Ser Ser Ile Val Gly Pro Leu Val Glu Met
130                 135                 140


Asn Thr Gly Glu Ala Glu Ser Arg Asn Ser Asn Phe Ala Thr Val Gly
145                 150                 155                 160


Ala Gly Ser Glu Asp Trp Val Asn Ala Ile Glu Phe Val Pro Gly Gln
                165                 170                 175


Pro Tyr Cys Gly Arg Thr Ala Pro Ser Cys Thr Glu Ala Pro Leu Gln
            180                 185                 190


Gly Ser Val Thr Lys Glu Glu Ser Glu Lys Glu Gln Thr Ala Val Glu
        195                 200                 205


Thr Lys Lys Gln Leu Cys Pro Tyr Ala Ala Val Gly Glu Cys Arg Tyr
    210                 215                 220
```

Gly Glu Asn Cys Val Tyr Leu His Gly Asp Ser Cys Asp Met Cys Gly
225   230   235   240

Leu Gln Leu Leu His Pro Met Asp Ala Ala Gln Arg Ser Gln His Ile
                245   250   255

Lys Ser Cys Ile Glu Ala His Glu Lys Asp Met Glu Leu Ser Phe Ala
            260   265   270

Val Gln Arg Ser Lys Asp Met Val Cys Gly Ile Cys Met Glu Val Val
        275   280   285

Tyr Glu Lys Ala Asn Pro Ser Glu Arg Arg Phe Gly Ile Leu Ser Asn
    290   295   300

Cys Asn His Thr Tyr Cys Leu Lys Cys Ile Arg Lys Trp Arg Ser Ala
305   310   315   320

Lys Gln Phe Glu Ser Lys Ile Ile Lys Ser Cys Pro Glu Cys Arg Ile
            325   330   335

Thr Ser Asn Phe Val Ile Pro Ser Glu Tyr Trp Val Glu Glu Lys Glu
            340   345   350

Glu Lys Gln Lys Leu Ile Leu Lys Tyr Lys Glu Ala Met Ser Asn Lys
    355   360   365

Ala Cys Arg Tyr Phe Asp Glu Gly Arg Gly Ser Cys Pro Phe Gly Gly
    370   375   380

Asn Cys Phe Tyr Lys His Ala Tyr Pro Asp Gly Arg Arg Glu Glu Pro
385   390   395   400

Gln Arg Gln Lys Val Gly Thr Ser Ser Arg Tyr Arg Ala Gln Arg Arg
        405   410   415

Asn His Phe Trp Glu Leu Ile Glu Glu Arg Glu Asn Ser Asn Pro Phe
        420   425   430

Asp Asn Asp Glu Glu Glu Val Val Thr Phe Glu Leu Gly Glu Met Leu
    435   440   445

Leu Met Leu Leu Ala Ala Gly Gly Asp Asp Glu Leu Thr Asp Ser Glu
    450   455   460

Asp Glu Trp Asp Leu Phe His Asp Glu Leu Glu Asp Phe Tyr Asp Leu

465   470   475   480

Asp Leu

<210> 2586
<211> 146
<212> PRT
<213> Homo sapiens

<400> 2586

Met Pro Ser Lys Gly Pro Leu Gln Ser Val Gln Val Phe Gly Arg Lys
1   5   10   15

Lys Thr Ala Thr Ala Val Ala His Cys Lys Arg Gly Asn Gly Leu Ile
            20   25   30

Lys Val Asn Gly Arg Pro Leu Glu Met Ile Glu Pro Arg Thr Leu Gln
            35   40   45

Tyr Lys Leu Leu Glu Pro Val Leu Leu Leu Gly Lys Glu Arg Phe Ala
        50   55   60

Gly Val Asp Ile Arg Val Arg Val Lys Gly Gly Gly His Val Ala Gln
65   70   75   80

Ile Tyr Ala Ile Arg Gln Ser Ile Ser Lys Ala Leu Val Ala Tyr Tyr
                85   90   95

Gln Lys Tyr Val Asp Glu Ala Ser Lys Lys Glu Ile Lys Asp Ile Leu
            100   105   110

Ile Gln Tyr Asp Arg Thr Leu Leu Val Ala Asp Pro Arg Arg Cys Glu
            115   120   125

Ser Lys Lys Phe Gly Gly Pro Gly Ala Arg Ala Arg Tyr Gln Lys Ser
        130   135   140

Tyr Arg
145

<210> 2587
<211> 1674
<212> PRT
<213> Homo sapiens

<400> 2587

```
Met Glu Asp Ala Ser Glu Ser Ser Arg Gly Val Ala Pro Leu Ile Asn
1               5               10              15

Asn Val Val Leu Pro Gly Ser Pro Leu Ser Leu Pro Val Ser Val Thr
            20              25              30

Gly Cys Lys Ser His Arg Val Ala Asn Lys Lys Val Glu Ala Arg Ser
        35              40              45

Glu Lys Leu Leu Pro Thr Ala Leu Pro Pro Ser Glu Pro Lys Val Asp
    50              55              60

Gln Lys Leu Pro Arg Ser Ser Glu Arg Arg Gly Ser Gly Gly Gly Thr
65              70              75              80

Gln Phe Pro Ala Arg Ser Arg Ala Val Ala Ala Gly Glu Ala Ala Ala
                85              90              95

Arg Gly Ala Ala Gly Pro Glu Arg Gly Ser Pro Leu Gly Arg Arg Val
            100             105             110

Ser Pro Arg Cys Leu Cys Ser Gly Glu Gly Gly Gln Val Ala Val Gly
    115             120             125

Val Ile Ala Gly Lys Arg Gly Arg Arg Gly Arg Asp Gly Ser Arg Arg
    130             135             140

Ala Pro Gly Gly Arg Glu Met Pro Leu Leu His Arg Lys Pro Phe Val
145             150             155             160

Arg Gln Lys Pro Pro Ala Asp Leu Arg Pro Asp Glu Glu Val Phe Tyr
            165             170             175

Cys Lys Val Thr Asn Glu Ile Phe Arg His Tyr Asp Asp Phe Phe Glu
            180             185             190

Arg Thr Ile Leu Cys Asn Ser Leu Val Trp Ser Cys Ala Val Thr Gly
    195             200             205

Arg Pro Gly Leu Thr Tyr Gln Glu Ala Leu Glu Ser Glu Lys Lys Ala
210             215             220

Arg Gln Asn Leu Gln Ser Phe Pro Glu Pro Leu Ile Ile Pro Val Leu
225             230             235             240

Tyr Leu Thr Ser Leu Thr His Arg Ser Arg Leu His Glu Ile Cys Asp
```

1007

                    245   250   255

Asp Ile Phe Ala Tyr Val Lys Asp Arg Tyr Phe Val Glu Glu Thr Val
             260   265   270

Glu Val Ile Arg Asn Asn Gly Ala Arg Leu Gln Cys Thr Ile Leu Glu
             275   280   285

Val Leu Pro Pro Ser His Gln Asn Gly Phe Ala Asn Gly His Val Asn
             290   295   300

Ser Val Asp Gly Glu Thr Ile Ile Ile Ser Asp Ser Asp Asp Ser Glu
305   310   315   320

Thr Gln Ser Cys Ser Phe Gln Asn Gly Lys Lys Asp Ala Ile Asp
                   325   330   335

Pro Leu Leu Phe Lys Tyr Lys Val Gln Pro Thr Lys Lys Glu Leu His
                   340   345   350

Glu Ser Ala Ile Val Lys Ala Thr Gln Ile Ser Arg Arg Lys His Leu
             355   360   365

Phe Ser Arg Asp Lys Leu Lys Leu Phe Leu Lys Gln His Cys Glu Pro
370   375   380

Gln Glu Gly Val Ile Lys Ile Lys Ala Ser Ser Leu Ser Thr Tyr Lys
385   390   395   400

Ile Ala Glu Gln Asp Phe Ser Tyr Phe Phe Pro Asp Asp Pro Pro Thr
                   405   410   415

Phe Ile Phe Ser Pro Ala Asn Arg Arg Arg Gly Arg Pro Pro Lys Arg
                   420   425   430

Ile His Ile Ser Gln Glu Asp Asn Val Ala Asn Lys Gln Thr Leu Ala
                   435   440   445

Ser Tyr Arg Ser Lys Ala Thr Lys Glu Arg Asp Lys Leu Leu Lys Gln
       450   455   460

Glu Glu Met Lys Ser Leu Ala Phe Glu Lys Ala Lys Leu Lys Arg Glu
465   470   475   480

Lys Ala Asp Ala Leu Glu Ala Lys Lys Lys Glu Lys Glu Asp Lys Glu
                   485   490   495

```
Lys Lys Arg Glu Glu Leu Lys Lys Ile Val Glu Glu Glu Arg Leu Lys
        500                     505                 510

Lys Lys Glu Glu Lys Glu Arg Leu Lys Val Glu Arg Glu Lys Glu Arg
        515                     520                 525

Glu Lys Leu Arg Glu Glu Lys Arg Lys Tyr Val Glu Tyr Leu Lys Gln
    530                     535                 540

Trp Ser Lys Pro Arg Glu Asp Met Glu Cys Asp Asp Leu Lys Glu Leu
545                     550                 555                 560

Pro Glu Pro Thr Pro Val Lys Thr Arg Leu Pro Pro Glu Ile Phe Gly
                565                 570                 575

Asp Ala Leu Met Val Leu Glu Phe Leu Asn Ala Phe Gly Glu Leu Phe
                580                 585                 590

Asp Leu Gln Asp Glu Phe Pro Asp Gly Val Thr Leu Glu Val Leu Glu
            595                 600                 605

Glu Ala Leu Val Gly Asn Asp Ser Glu Gly Pro Leu Cys Glu Leu Leu
    610                 615                 620

Phe Phe Phe Leu Thr Ala Ile Phe Gln Ala Ile Ala Glu Glu Glu Glu
625                 630                 635                 640

Glu Val Ala Lys Glu Gln Leu Thr Asp Ala Asp Thr Lys Gly Cys Ser
                645                 650                 655

Leu Lys Ser Leu Asp Leu Asp Ser Cys Thr Leu Ser Glu Ile Leu Arg
                660                 665                 670

Leu His Ile Leu Ala Ser Gly Ala Asp Val Thr Ser Ala Asn Ala Lys
            675                 680                 685

Tyr Arg Tyr Gln Lys Arg Gly Gly Phe Asp Ala Thr Asp Asp Ala Cys
    690                 695                 700

Met Glu Leu Arg Leu Ser Asn Pro Ser Leu Val Lys Lys Leu Ser Ser
705                 710                 715                 720

Thr Ser Val Tyr Asp Leu Thr Pro Gly Glu Lys Met Lys Ile Leu His
                725                 730                 735
```

1009

Ala Leu Cys Gly Lys Leu Leu Thr Leu Val Ser Thr Arg Asp Phe Ile
            740   745   750

Glu Asp Tyr Val Asp Ile Leu Arg Gln Ala Lys Gln Glu Phe Arg Glu
            755   760   765

Leu Lys Ala Glu Gln His Arg Lys Glu Arg Glu Glu Ala Ala Ala Arg
    770   775   780

Ile Arg Lys Arg Lys Glu Glu Lys Leu Lys Glu Gln Glu Gln Lys Met
785   790   795   800

Lys Glu Lys Gln Glu Lys Leu Lys Glu Asp Glu Gln Arg Asn Ser Thr
                805   810   815

Ala Asp Ile Ser Ile Gly Glu Glu Glu Arg Glu Asp Phe Asp Thr Ser
            820   825   830

Ile Glu Ser Lys Asp Thr Glu Gln Lys Glu Leu Asp Gln Asp Met Phe
            835   840   845

Thr Glu Asp Glu Asp Asp Pro Gly Ser His Lys Arg Gly Arg Arg Gly
    850   855   860

Lys Arg Gly Gln Asn Gly Phe Lys Glu Phe Thr Arg Gln Glu Gln Ile
865   870   875   880

Asn Cys Val Thr Arg Glu Leu Leu Thr Ala Asp Glu Glu Glu Ala Leu
            885   890   895

Lys Gln Glu His Gln Arg Lys Glu Lys Glu Leu Leu Glu Lys Ile Gln
            900   905   910

Ser Ala Ile Ala Cys Thr Asn Ile Phe Pro Leu Gly Arg Asp Arg Met
    915   920   925

Tyr Arg Arg Tyr Trp Ile Phe Pro Ser Ile Pro Gly Leu Phe Ile Glu
    930   935   940

Glu Asp Tyr Ser Gly Leu Thr Glu Asp Met Leu Leu Pro Arg Pro Ser
945   950   955   960

Ser Phe Gln Asn Asn Val Gln Ser Gln Asp Pro Gln Val Ser Thr Lys
            965   970   975

```
Thr Gly Glu Pro Leu Met Ser Glu Ser Thr Ser Asn Ile Asp Gln Gly
        980                 985                 990


Pro Arg Asp His Ser Val Gln Leu  Pro Lys Pro Val His  Lys Pro Asn
        995                 1000                1005


Arg Trp Cys Phe Tyr Ser Ser  Cys Glu Gln Leu Asp  Gln Leu Ile
    1010            1015            1020


Glu Ala Leu Asn Ser Arg Gly  His Arg Glu Ser Ala  Leu Lys Glu
    1025            1030            1035


Thr Leu Leu Gln Glu Lys Ser  Arg Ile Cys Ala Gln  Leu Ala Arg
    1040            1045            1050


Phe Ser Glu Glu Lys Phe His  Phe Ser Asp Lys Pro  Gln Pro Asp
    1055            1060            1065


Ser Lys Pro Thr Tyr Ser Arg  Gly Arg Ser Ser Asn  Ala Tyr Asp
    1070            1075            1080


Pro Ser Gln Met Cys Ala Glu  Lys Gln Leu Glu Leu  Arg Leu Arg
    1085            1090            1095


Asp Phe Leu Leu Asp Ile Glu  Asp Arg Ile Tyr Gln  Gly Thr Leu
    1100            1105            1110


Gly Ala Ile Lys Val Thr Asp  Arg His Ile Trp Arg  Ser Ala Leu
    1115            1120            1125


Glu Ser Gly Arg Tyr Glu Leu  Leu Ser Glu Glu Asn  Lys Glu Asn
    1130            1135            1140


Gly Ile Ile Lys Thr Val Asn  Glu Asp Val Glu Glu  Met Glu Ile
    1145            1150            1155


Asp Glu Gln Thr Lys Val Ile  Val Lys Asp Arg Leu  Leu Gly Ile
    1160            1165            1170


Lys Thr Glu Thr Pro Ser Thr  Val Ser Thr Asn Ala  Ser Thr Pro
    1175            1180            1185


Gln Ser Val Ser Ser Val Val  His Tyr Leu Ala Met  Ala Leu Phe
    1190            1195            1200


Gln Ile Glu Gln Gly Ile Glu  Arg Arg Phe Leu Lys  Ala Pro Leu
```

1011

```
        1205                      1210                      1215


Asp Ala  Ser Asp Ser Gly Arg  Ser Tyr Lys Thr Val  Leu Asp Arg
    1220                1225                1230


Trp Arg  Glu Ser Leu Leu Ser  Ser Ala Ser Leu Ser  Gln Val Phe
    1235                1240                1245


Leu His  Leu Ser Thr Leu Asp  Arg Ser Val Ile Trp  Ser Lys Ser
    1250                1255                1260


Ile Leu  Asn Ala Arg Cys Lys  Ile Cys Arg Lys Lys  Gly Asp Ala
    1265                1270                1275


Glu Asn  Met Val Leu Cys Asp  Gly Cys Asp Arg Gly  His His Thr
    1280                1285                1290


Tyr Cys  Val Arg Pro Lys Leu  Lys Thr Val Pro Glu  Gly Asp Trp
    1295                1300                1305


Phe Cys  Pro Glu Cys Arg Pro  Lys Gln Arg Cys Arg  Arg Leu Ser
    1310                1315                1320


Phe Arg  Gln Arg Pro Ser Leu  Glu Ser Asp Glu Asp  Val Glu Asp
    1325                1330                1335


Ser Met  Gly Gly Glu Asp Asp  Glu Val Asp Gly Asp  Glu Glu Glu
    1340                1345                1350


Gly Gln  Ser Glu Glu Glu Glu  Tyr Glu Val Glu Gln  Asp Glu Asp
    1355                1360                1365


Asp Ser  Gln Glu Glu Glu Glu  Val Ser Leu Pro Lys  Arg Gly Arg
    1370                1375                1380


Pro Gln  Val Arg Leu Pro Val  Lys Thr Arg Gly Lys  Leu Ser Ser
    1385                1390                1395


Ser Phe  Ser Ser Arg Gly Gln  Gln Gln Glu Pro Gly  Arg Tyr Pro
    1400                1405                1410


Ser Arg  Ser Gln Gln Ser Thr  Pro Lys Thr Thr Val  Ser Ser Lys
    1415                1420                1425


Thr Gly  Arg Ser Leu Arg Lys  Ile Asn Ser Ala Pro  Pro Thr Glu
    1430                1435                1440
```

1012

```
Thr Lys  Ser Leu Arg Ile Ala  Ser Arg Ser Thr Arg  His Ser His
    1445                 1450              1455

Gly Pro  Leu Gln Ala Asp Val  Phe Val Glu Leu Leu  Ser Pro Arg
    1460                 1465              1470

Arg Lys  Arg Arg Gly Arg Lys  Ser Ala Asn Asn Thr  Pro Glu Asn
    1475                 1480              1485

Ser Pro  Asn Phe Pro Asn Phe  Arg Val Ile Ala Thr  Lys Ser Ser
    1490                 1495              1500

Glu Gln  Ser Arg Ser Val Asn  Ile Ala Ser Lys Leu  Ser Leu Gln
    1505                 1510              1515

Glu Ser  Glu Ser Lys Arg Arg  Cys Arg Lys Arg Gln  Ser Pro Glu
    1520                 1525              1530

Pro Ser  Pro Val Thr Leu Gly  Arg Arg Ser Ser Gly  Arg Gln Gly
    1535                 1540              1545

Gly Val  His Glu Leu Ser Ala  Phe Glu Gln Leu Val  Val Glu Leu
    1550                 1555              1560

Val Arg  His Asp Asp Ser Trp  Pro Phe Leu Lys Leu  Val Ser Lys
    1565                 1570              1575

Ile Gln  Val Pro Asp Tyr Tyr  Asp Ile Ile Lys Lys  Pro Ile Ala
    1580                 1585              1590

Leu Asn  Ile Ile Arg Glu Lys  Val Asn Lys Cys Glu  Tyr Lys Leu
    1595                 1600              1605

Ala Ser  Glu Phe Ile Asp Asp  Ile Glu Leu Met Phe  Ser Asn Cys
    1610                 1615              1620

Phe Glu  Tyr Asn Pro Arg Asn  Thr Ser Glu Ala Lys  Ala Gly Thr
    1625                 1630              1635

Arg Leu  Gln Ala Phe Phe His  Ile Gln Ala Gln Lys  Leu Gly Leu
    1640                 1645              1650

His Val  Thr Pro Ser Asn Val  Asp Gln Val Ser Thr  Pro Pro Ala
    1655                 1660              1665
```

Ala Lys   Lys Ser Arg Ile
    1670

<210>   2588
<211>   103
<212>   PRT
<213>   Homo sapiens

<400>   2588

Met Ala Gln Phe Val Arg Asn Leu Val Glu Lys Thr Pro Ala Leu Val
1   5   10   15

Asn Ala Ala Val Thr Tyr Ser Lys Pro Arg Leu Ala Thr Phe Trp Tyr
            20   25   30

Tyr Ala Lys Val Glu Leu Val Pro Pro Thr Pro Ala Glu Ile Pro Arg
            35   40   45

Ala Ile Gln Ser Leu Lys Lys Ile Ala Asn Ser Ala Gln Thr Gly Ser
        50   55   60

Phe Lys Gln Leu Thr Val Lys Glu Ala Val Leu Asn Gly Leu Val Ala
65   70   75   80

Thr Glu Val Leu Met Trp Phe Tyr Val Gly Glu Ile Ile Gly Lys Arg
                85   90   95

Gly Ile Ile Gly Tyr Asp Val
            100

<210>   2589
<211>   156
<212>   PRT
<213>   Homo sapiens

<400>   2589

Met Ser Gly Gly Leu Leu Lys Ala Leu Arg Ser Asp Ser Tyr Val Glu
1   5   10   15

Leu Ser Gln Tyr Arg Asp Gln His Phe Arg Gly Asp Asn Glu Glu Gln
            20   25   30

Glu Lys Leu Leu Lys Lys Ser Cys Thr Leu Tyr Val Gly Asn Leu Ser
            35   40   45

Phe Tyr Thr Thr Glu Glu Gln Ile Tyr Glu Leu Phe Ser Lys Ser Gly
        50   55   60

```
Asp Ile Lys Lys Ile Ile Met Gly Leu Asp Lys Met Lys Lys Thr Ala
65              70              75              80


Cys Gly Phe Cys Phe Val Glu Tyr Tyr Ser Arg Ala Asp Ala Glu Asn
            85              90              95


Ala Met Arg Tyr Ile Asn Gly Thr Arg Leu Asp Asp Arg Ile Ile Arg
            100             105             110


Thr Asp Trp Asp Ala Gly Phe Lys Glu Gly Arg Gln Tyr Gly Arg Gly
        115             120             125


Arg Ser Gly Gly Gln Val Arg Asp Glu Tyr Arg Gln Asp Tyr Asp Ala
    130             135             140


Gly Arg Gly Gly Tyr Gly Lys Leu Ala Gln Asn Gln
145             150             155
```

```
<210>  2590
<211>  436
<212>  PRT
<213>  Homo sapiens

<400>  2590
```

```
Met Asp Ser Val Ala Phe Glu Asp Val Ala Val Asn Phe Thr Gln Glu
1           5               10              15


Glu Trp Ala Leu Leu Ser Pro Ser Gln Lys Asn Leu Tyr Arg Asp Val
            20              25              30


Thr Leu Glu Thr Phe Arg Asn Leu Ala Ser Val Gly Ile Gln Trp Lys
        35              40              45


Asp Gln Asp Ile Glu Asn Leu Tyr Gln Asn Leu Gly Ile Lys Leu Arg
    50              55              60


Ser Leu Val Glu Arg Leu Cys Gly Arg Lys Glu Gly Asn Glu His Arg
65              70              75              80


Glu Thr Phe Ser Gln Ile Pro Asp Cys His Leu Asn Lys Lys Ser Gln
            85              90              95


Thr Gly Val Lys Pro Cys Lys Cys Ser Val Cys Gly Lys Val Phe Leu
            100             105             110
```

```
Arg His Ser Phe Leu Asp Arg His Met Arg Ala His Ala Gly His Lys
        115                 120                 125

Arg Ser Glu Cys Gly Gly Glu Trp Arg Glu Thr Pro Arg Lys Gln Lys
        130                 135                 140

Gln His Gly Lys Ala Ser Ile Ser Pro Ser Ser Gly Ala Arg Arg Thr
145                 150                 155                 160

Val Thr Pro Thr Arg Lys Arg Pro Tyr Glu Cys Lys Val Cys Gly Lys
                165                 170                 175

Ala Phe Asn Ser Pro Asn Leu Phe Gln Ile His Gln Arg Thr His Thr
            180                 185                 190

Gly Lys Arg Ser Tyr Lys Cys Arg Glu Ile Val Arg Ala Phe Thr Val
            195                 200                 205

Ser Ser Phe Phe Arg Lys His Gly Lys Met His Thr Gly Glu Lys Arg
210                 215                 220

Tyr Glu Cys Lys Tyr Cys Gly Lys Pro Ile Asp Tyr Pro Ser Leu Phe
225                 230                 235                 240

Gln Ile His Val Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Lys
                245                 250                 255

Gln Cys Gly Lys Ala Phe Ile Ser Ala Gly Tyr Leu Arg Thr His Glu
            260                 265                 270

Ile Arg Ser His Ala Leu Glu Lys Ser His Gln Cys Gln Glu Cys Gly
        275                 280                 285

Lys Lys Leu Ser Cys Ser Ser Ser Leu His Arg His Glu Arg Thr His
        290                 295                 300

Ser Gly Gly Lys Leu Tyr Glu Cys Gln Lys Cys Ala Lys Val Phe Arg
305                 310                 315                 320

Cys Pro Thr Ser Leu Gln Ala His Glu Arg Ala His Thr Gly Glu Arg
            325                 330                 335

Pro Tyr Glu Cys Asn Lys Cys Gly Lys Thr Phe Asn Tyr Pro Ser Cys
            340                 345                 350

Phe Arg Arg His Lys Lys Thr His Ser Gly Glu Lys Pro Tyr Glu Cys
```

1016

```
                355                          360                          365


    Thr Arg Cys Gly Lys Ala Phe Gly Trp Cys Ser Ser Leu Arg Arg His
        370                     375                 380


    Glu Met Thr His Thr Gly Glu Lys Pro Phe Asp Cys Lys Gln Cys Gly
    385                     390                 395                 400


    Lys Val Phe Thr Phe Ser Asn Tyr Leu Arg Leu His Glu Arg Thr His
                    405                 410                 415


    Leu Ala Gly Arg Ser Gln Cys Phe Gly Arg Arg Gln Gly Asp His Leu
                420                 425                 430


    Ser Pro Gly Val
            435


    <210>  2591
    <211>  92
    <212>  PRT
    <213>  Homo sapiens

    <400>  2591

    Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala
    1               5                   10                  15


    Leu Cys Asn Gln Phe Ser Ala Ser Leu Ala Ala Asp Thr Pro Thr Ala
                20                  25                  30


    Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile Ala
                35                  40                  45


    Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Gly Val Ile Phe
        50                  55                  60


    Leu Thr Lys Arg Ser Arg Gln Val Cys Ala Asp Pro Ser Glu Glu Trp
    65                  70                  75                  80


    Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala
                    85                  90


    <210>  2592
    <211>  271
    <212>  PRT
    <213>  Homo sapiens

    <400>  2592
```

```
Met Glu Ala Leu Pro Leu Leu Ala Ala Thr Thr Pro Asp His Gly Arg
1                 5                 10                15


His Arg Arg Leu Leu Leu Leu Pro Leu Leu Phe Leu Leu Pro Ala
            20                25                30


Gly Ala Val Gln Gly Trp Glu Thr Glu Glu Arg Pro Arg Thr Arg Glu
            35                40                45


Glu Glu Cys His Phe Tyr Ala Gly Gly Gln Val Tyr Pro Gly Glu Ala
        50                55                60


Ser Arg Val Ser Val Ala Asp His Ser Leu His Leu Ser Lys Ala Lys
65                70                75                80


Ile Ser Lys Pro Ala Pro Tyr Trp Glu Gly Thr Ala Val Ile Asp Gly
                85                90                95


Glu Phe Lys Glu Leu Lys Leu Thr Asp Tyr Arg Gly Lys Tyr Leu Val
            100               105               110


Phe Phe Phe Tyr Pro Leu Asp Phe Thr Phe Val Cys Pro Thr Glu Ile
        115               120               125


Ile Ala Phe Gly Asp Arg Leu Glu Glu Phe Arg Ser Ile Asn Thr Glu
    130               135               140


Val Val Ala Cys Ser Val Asp Ser Gln Phe Thr His Leu Ala Trp Ile
145               150               155               160


Asn Thr Pro Arg Arg Gln Gly Gly Leu Gly Pro Ile Arg Ile Pro Leu
                165               170               175


Leu Ser Asp Leu Thr His Gln Ile Ser Lys Asp Tyr Gly Val Tyr Leu
            180               185               190


Glu Asp Ser Gly His Thr Leu Arg Gly Leu Phe Ile Ile Asp Asp Lys
            195               200               205


Gly Ile Leu Arg Gln Ile Thr Leu Asn Asp Leu Pro Val Gly Arg Ser
    210               215               220


Val Asp Glu Thr Leu Arg Leu Val Gln Ala Phe Gln Tyr Thr Asp Lys
225               230               235               240


His Gly Glu Val Cys Pro Ala Gly Trp Lys Pro Gly Ser Glu Thr Ile
```

1018

```
                      245                    250                     255

   Ile Pro Asp Pro Ala Gly Lys Leu Lys Tyr Phe Asp Lys Leu Asn
                 260               265              270,
```

<210> 2593
<211> 659
<212> PRT
<213> Homo sapiens

<400> 2593

```
Met Ala Ala Val Ile Leu Glu Ser Ile Phe Leu Lys Arg Ser Gln Gln
1               5               10              15

Lys Lys Lys Thr Ser Pro Leu Asn Phe Lys Lys Arg Leu Phe Leu Leu
             20              25              30

Thr Val His Lys Leu Ser Tyr Tyr Glu Tyr Asp Phe Glu Arg Gly Arg
         35              40              45

Arg Gly Ser Lys Lys Gly Ser Ile Asp Val Glu Lys Ile Thr Cys Val
     50              55              60

Glu Thr Val Val Pro Glu Lys Asn Pro Pro Glu Arg Gln Ile Pro
65              70              75              80

Arg Arg Gly Glu Glu Ser Ser Glu Met Glu Gln Ile Ser Ile Ile Glu
                 85              90              95

Arg Phe Pro Tyr Pro Phe Gln Val Val Tyr Asp Glu Gly Pro Leu Tyr
             100             105             110

Val Phe Ser Pro Thr Glu Glu Leu Arg Lys Arg Trp Ile His Gln Leu
         115             120             125

Lys Asn Val Ile Arg Tyr Asn Ser Asp Leu Val Gln Lys Tyr His Pro
     130             135             140

Cys Phe Trp Ile Asp Gly Gln Tyr Leu Cys Cys Ser Gln Thr Ala Lys
145             150             155             160

Asn Ala Met Gly Cys Gln Ile Leu Glu Asn Arg Asn Gly Ser Leu Lys
                 165             170             175

Pro Gly Ser Ser His Arg Lys Thr Lys Lys Pro Leu Pro Pro Thr Pro
             180             185             190
```

```
Glu Glu Asp Gln Ile Leu Lys Lys Pro Leu Pro Pro Glu Pro Ala Ala
        195             200             205

Ala Pro Val Ser Thr Ser Glu Leu Lys Lys Val Val Ala Leu Tyr Asp
    210             215             220

Tyr Met Pro Met Asn Ala Asn Asp Leu Gln Leu Arg Lys Gly Asp Glu
225             230             235             240

Tyr Phe Ile Leu Glu Glu Ser Asn Leu Pro Trp Trp Arg Ala Arg Asp
            245             250             255

Lys Asn Gly Gln Glu Gly Tyr Ile Pro Ser Asn Tyr Val Thr Glu Ala
        260             265             270

Glu Asp Ser Ile Glu Met Tyr Glu Trp Tyr Ser Lys His Met Thr Arg
        275             280             285

Ser Gln Ala Glu Gln Leu Leu Lys Gln Glu Gly Lys Glu Gly Gly Phe
    290             295             300

Ile Val Arg Asp Ser Ser Lys Ala Gly Lys Tyr Thr Val Ser Val Phe
305             310             315             320

Ala Lys Ser Thr Gly Asp Pro Gln Gly Val Ile Arg His Tyr Val Val
            325             330             335

Cys Ser Thr Pro Gln Ser Gln Tyr Tyr Leu Ala Glu Lys His Leu Phe
            340             345             350

Ser Thr Ile Pro Glu Leu Ile Asn Tyr His Gln His Asn Ser Ala Gly
        355             360             365

Leu Ile Ser Arg Leu Lys Tyr Pro Val Ser Gln Gln Asn Lys Asn Ala
    370             375             380

Pro Ser Thr Ala Gly Leu Gly Tyr Gly Ser Trp Glu Ile Asp Pro Lys
385             390             395             400

Asp Leu Thr Phe Leu Lys Glu Leu Gly Thr Gly Gln Phe Gly Val Val
            405             410             415

Lys Tyr Gly Lys Trp Arg Gly Gln Tyr Asp Val Ala Ile Lys Met Ile
        420             425             430
```

```
Lys Glu Gly Ser Met Ser Glu Asp Glu Phe Ile Glu Glu Ala Lys Val
    435                 440                 445
```

```
Met Met Asn Leu Ser His Glu Lys Leu Val Gln Leu Tyr Gly Val Cys
    450                 455                 460
```

```
Thr Lys Gln Arg Pro Ile Phe Ile Ile Thr Glu Tyr Met Ala Asn Gly
465                 470                 475                 480
```

```
Cys Leu Leu Asn Tyr Leu Arg Glu Met Arg His Arg Phe Gln Thr Gln
                485                 490                 495
```

```
Gln Leu Leu Glu Met Cys Lys Asp Val Cys Glu Ala Met Glu Tyr Leu
            500                 505                 510
```

```
Glu Ser Lys Gln Phe Leu His Arg Asp Leu Ala Ala Arg Asn Cys Leu
        515                 520                 525
```

```
Val Asn Asp Gln Gly Val Val Lys Val Ser Asp Phe Gly Leu Ser Arg
    530                 535                 540
```

```
Tyr Val Leu Asp Asp Glu Tyr Thr Ser Ser Val Gly Ser Lys Phe Pro
545                 550                 555                 560
```

```
Val Arg Trp Ser Pro Pro Glu Val Leu Met Tyr Ser Lys Phe Ser Ser
                565                 570                 575
```

```
Lys Ser Asp Ile Trp Ala Phe Gly Val Leu Met Trp Glu Ile Tyr Ser
            580                 585                 590
```

```
Leu Gly Lys Met Pro Tyr Glu Arg Phe Thr Asn Ser Glu Thr Ala Glu
        595                 600                 605
```

```
His Ile Ala Gln Gly Leu Arg Leu Tyr Arg Pro His Leu Ala Ser Glu
    610                 615                 620
```

```
Lys Val Tyr Thr Ile Met Tyr Ser Cys Trp His Glu Lys Ala Asp Glu
625                 630                 635                 640
```

```
Arg Pro Thr Phe Lys Ile Leu Leu Ser Asn Ile Leu Asp Val Met Asp
                645                 650                 655
```

```
Glu Glu Ser
```

<210> 2594

<211> 417
<212> PRT
<213> Homo sapiens

<400> 2594

Met Ser Leu Ser Asn Lys Leu Thr Leu Asp Lys Leu Asp Val Lys Gly
1   5   10   15

Lys Arg Val Val Met Arg Val Asp Phe Asn Val Pro Met Lys Asn Asn
            20   25   30

Gln Ile Thr Asn Asn Gln Arg Ile Lys Ala Ala Val Pro Ser Ile Lys
            35   40   45

Phe Cys Leu Asp Asn Gly Ala Lys Ser Val Val Leu Met Ser His Leu
        50   55   60

Gly Arg Pro Asp Gly Val Pro Met Pro Asp Lys Tyr Ser Leu Glu Pro
65   70   75   80

Val Ala Val Glu Leu Lys Ser Leu Leu Gly Lys Asp Val Leu Phe Leu
                85   90   95

Lys Asp Cys Val Gly Pro Glu Val Glu Lys Ala Cys Ala Asn Pro Ala
            100   105   110

Ala Gly Ser Val Ile Leu Leu Glu Asn Leu Arg Phe His Val Glu Glu
        115   120   125

Glu Gly Lys Gly Lys Asp Ala Ser Gly Asn Lys Val Lys Ala Glu Pro
        130   135   140

Ala Lys Ile Glu Ala Phe Arg Ala Ser Leu Ser Lys Leu Gly Asp Val
145   150   155   160

Tyr Val Asn Asp Ala Phe Gly Thr Ala His Arg Ala His Ser Ser Met
                165   170   175

Val Gly Val Asn Leu Pro Gln Lys Ala Gly Gly Phe Leu Met Lys Lys
            180   185   190

Glu Leu Asn Tyr Phe Ala Lys Ala Leu Glu Ser Pro Glu Arg Pro Phe
        195   200   205

Leu Ala Ile Leu Gly Gly Ala Lys Val Ala Asp Lys Ile Gln Leu Ile
210   215   220

Asn Asn Met Leu Asp Lys Val Asn Glu Met Ile Ile Gly Gly Gly Met
225   230   235   240

Ala Phe Thr Phe Leu Lys Val Leu Asn Asn Met Glu Ile Gly Thr Ser
                245   250   255

Leu Phe Asp Glu Glu Gly Ala Lys Ile Val Lys Asp Leu Met Ser Lys
            260   265   270

Ala Glu Lys Asn Gly Val Lys Ile Thr Leu Pro Val Asp Phe Val Thr
        275   280   285

Ala Asp Lys Phe Asp Glu Asn Ala Lys Thr Gly Gln Ala Thr Val Ala
    290   295   300

Ser Gly Ile Pro Ala Gly Trp Met Gly Leu Asp Cys Gly Pro Glu Ser
305   310   315   320

Ser Lys Lys Tyr Ala Glu Ala Val Thr Arg Ala Lys Gln Ile Val Trp
            325   330   335

Asn Gly Pro Val Gly Val Phe Glu Trp Glu Ala Phe Ala Arg Gly Thr
            340   345   350

Lys Ala Leu Met Asp Glu Val Val Lys Ala Thr Ser Arg Gly Cys Ile
        355   360   365

Thr Ile Ile Gly Gly Gly Asp Thr Ala Thr Cys Cys Ala Lys Trp Asn
    370   375   380

Thr Glu Asp Lys Val Ser His Val Ser Thr Gly Gly Gly Ala Ser Leu
385   390   395   400

Glu Leu Leu Glu Gly Lys Val Leu Pro Gly Val Asp Ala Leu Ser Asn
            405   410   415

Ile

<210> 2595
<211> 468
<212> PRT
<213> Homo sapiens

<400> 2595

Met Ala Pro Pro Pro Ala Arg Val His Leu Gly Ala Phe Leu Ala Val

```
 1                    5                         10                          15

    Thr Pro Asn Pro Gly Ser Ala Ala Ser Gly Thr Glu Ala Ala Ala Ala
                 20                      25                      30

    Thr Pro Ser Lys Val Trp Gly Ser Ser Ala Gly Arg Ile Glu Pro Arg
                 35                      40                      45

    Gly Gly Gly Arg Gly Ala Leu Pro Thr Ser Met Gly Gln His Gly Pro
             50                      55                      60

    Ser Ala Arg Ala Arg Ala Gly Arg Ala Pro Gly Pro Arg Pro Ala Arg
        65                      70                      75                      80

    Glu Ala Ser Pro Arg Leu Arg Val His Lys Thr Phe Lys Phe Val Val
                 85                      90                      95

    Val Gly Val Leu Leu Gln Val Val Pro Ser Ser Ala Ala Thr Ile Lys
                100                     105                     110

    Leu His Asp Gln Ser Ile Gly Thr Gln Gln Trp Glu His Ser Pro Leu
                115                     120                     125

    Gly Glu Leu Cys Pro Pro Gly Ser His Arg Ser Glu His Pro Gly Ala
        130                     135                     140

    Cys Asn Arg Cys Thr Glu Gly Val Gly Tyr Thr Asn Ala Ser Asn Asn
        145                     150                     155                     160

    Leu Phe Ala Cys Leu Pro Cys Thr Ala Cys Lys Ser Asp Glu Glu Glu
                165                     170                     175

    Arg Ser Pro Cys Thr Thr Thr Arg Asn Thr Ala Cys Gln Cys Lys Pro
                180                     185                     190

    Gly Thr Phe Arg Asn Asp Asn Ser Ala Glu Met Cys Arg Lys Cys Ser
                195                     200                     205

    Arg Gly Cys Pro Arg Gly Met Val Lys Val Lys Asp Cys Thr Pro Trp
        210                     215                     220

    Ser Asp Ile Glu Cys Val His Lys Glu Ser Gly Asn Gly His Asn Ile
        225                     230                     235                     240

    Trp Val Ile Leu Val Val Thr Leu Val Val Pro Leu Leu Leu Val Ala
                245                     250                     255
```

```
Val Leu Ile Val Cys Cys Cys Ile Gly Ser Gly Cys Gly Gly Asp Pro
            260             265             270

Lys Cys Met Asp Arg Val Cys Phe Trp Arg Leu Gly Leu Leu Arg Gly
        275             280             285

Pro Gly Ala Glu Asp Asn Ala His Asn Glu Ile Leu Ser Asn Ala Asp
    290             295             300

Ser Leu Ser Thr Phe Val Ser Glu Gln Gln Met Glu Ser Gln Glu Pro
305             310             315             320

Ala Asp Leu Thr Gly Val Thr Val Gln Ser Pro Gly Glu Ala Gln Cys
            325             330             335

Leu Leu Gly Pro Ala Glu Ala Glu Gly Ser Gln Arg Arg Arg Leu Leu
            340             345             350

Val Pro Ala Asn Gly Ala Asp Pro Thr Glu Thr Leu Met Leu Phe Phe
    355             360             365

Asp Lys Phe Ala Asn Ile Val Pro Phe Asp Ser Trp Asp Gln Leu Met
    370             375             380

Arg Gln Leu Asp Leu Thr Lys Asn Glu Ile Asp Val Val Arg Ala Gly
385             390             395             400

Thr Ala Gly Pro Gly Asp Ala Leu Tyr Ala Met Leu Met Lys Trp Val
            405             410             415

Asn Lys Thr Gly Arg Asn Ala Ser Ile His Thr Leu Leu Asp Ala Leu
            420             425             430

Glu Arg Met Glu Glu Arg His Ala Lys Glu Lys Ile Gln Asp Leu Leu
        435             440             445

Val Asp Ser Gly Lys Phe Ile Tyr Leu Glu Asp Gly Thr Gly Ser Ala
    450             455             460

Val Ser Leu Glu
465
```

<210> 2596
<211> 185
<212> PRT

<213>   Homo sapiens

<400>   2596

Met Lys Leu Val Ser Val Ala Leu Met Tyr Leu Gly Ser Leu Ala Phe
1   5   10   15

Leu Gly Ala Asp Thr Ala Arg Leu Asp Val Ala Ser Glu Phe Arg Lys
            20   25   30

Lys Trp Asn Lys Trp Ala Leu Ser Arg Gly Lys Arg Glu Leu Arg Met
        35   40   45

Ser Ser Ser Tyr Pro Thr Gly Leu Ala Asp Val Lys Ala Gly Pro Ala
    50   55   60

Gln Thr Leu Ile Arg Pro Gln Asp Met Lys Gly Ala Ser Arg Ser Pro
65   70   75   80

Glu Asp Ser Ser Pro Asp Ala Ala Arg Ile Arg Val Lys Arg Tyr Arg
                85   90   95

Gln Ser Met Asn Asn Phe Gln Gly Leu Arg Ser Phe Gly Cys Arg Phe
            100   105   110

Gly Thr Cys Thr Val Gln Lys Leu Ala His Gln Ile Tyr Gln Phe Thr
        115   120   125

Asp Lys Asp Lys Asp Asn Val Ala Pro Arg Ser Lys Ile Ser Pro Gln
    130   135   140

Gly Tyr Gly Arg Arg Arg Arg Ser Leu Pro Glu Ala Gly Pro Gly
145   150   155   160

Arg Thr Leu Val Ser Ser Lys Pro Gln Ala His Gly Ala Pro Ala Pro
            165   170   175

Pro Ser Gly Ser Ala Pro His Phe Leu
        180   185

<210>   2597
<211>   851
<212>   PRT
<213>   Homo sapiens

<400>   2597

Met Ser Ser Lys Gln Glu Ile Met Ser Asp Gln Arg Phe Arg Arg Val
1   5   10   15

```
Ala Lys Asp Pro Arg Phe Trp Glu Met Pro Glu Lys Asp Arg Lys Val
            20              25              30


Lys Ile Asp Lys Arg Phe Arg Ala Met Phe His Asp Lys Lys Phe Lys
        35              40              45


Leu Asn Tyr Ala Val Asp Lys Arg Gly Arg Pro Ile Ser His Ser Thr
    50              55              60


Thr Glu Asp Leu Lys Arg Phe Tyr Asp Leu Ser Asp Ser Asp Ser Asn
65              70              75              80


Leu Ser Gly Glu Asp Ser Lys Ala Leu Ser Gln Lys Lys Ile Lys Lys
            85              90              95


Lys Lys Thr Gln Thr Lys Lys Glu Ile Asp Ser Lys Asn Leu Val Glu
            100             105             110


Lys Lys Lys Glu Thr Lys Lys Ala Asn His Lys Gly Ser Glu Asn Lys
        115             120             125


Thr Asp Leu Asp Asn Ser Ile Gly Ile Lys Lys Met Lys Thr Ser Cys
    130             135             140


Lys Phe Lys Ile Asp Ser Asn Ile Ser Pro Lys Lys Asp Ser Lys Glu
145             150             155             160


Phe Thr Gln Lys Asn Lys Lys Glu Lys Lys Asn Ile Val Gln His Thr
            165             170             175


Thr Asp Ser Ser Leu Glu Glu Lys Gln Arg Thr Leu Asp Ser Gly Thr
        180             185             190


Ser Glu Ile Val Lys Ser Pro Arg Ile Glu Cys Ser Lys Thr Arg Arg
        195             200             205


Glu Met Gln Ser Val Val Gln Leu Ile Met Thr Arg Asp Ser Asp Gly
    210             215             220


Tyr Glu Asn Ser Thr Asp Gly Glu Met Cys Asp Lys Asp Ala Leu Glu
225             230             235             240


Glu Asp Ser Glu Ser Val Ser Glu Ile Gly Ser Asp Glu Glu Ser Glu
            245             250             255
```

Asn Glu Ile Thr Ser Val Gly Arg Ala Ser Gly Asp Asp Asp Gly Ser
        260   265   270

Glu Asp Asp Glu Glu Glu Asp Glu Asp Glu Glu Glu Asp Glu Asp Glu
        275   280   285

Asp Ser Glu Asp Asp Asp Lys Ser Asp Ser Gly Pro Asp Leu Ala Arg
    290   295   300

Gly Lys Gly Asn Ile Glu Thr Ser Ser Glu Asp Glu Asp Asp Thr Ala
305   310   315   320

Asp Leu Phe Pro Glu Glu Ser Gly Phe Glu His Ala Trp Arg Glu Leu
            325   330   335

Asp Lys Asp Ala Pro Arg Ala Asp Glu Ile Thr Arg Arg Leu Ala Val
            340   345   350

Cys Asn Met Asp Trp Asp Arg Leu Lys Ala Lys Asp Leu Leu Ala Leu
            355   360   365

Phe Asn Ser Phe Lys Pro Lys Gly Gly Val Ile Phe Ser Val Lys Ile
    370   375   380

Tyr Pro Ser Glu Phe Gly Lys Glu Arg Met Lys Glu Glu Gln Val Gln
385   390   395   400

Gly Pro Val Glu Leu Leu Ser Ile Pro Glu Asp Ala Pro Glu Lys Asp
            405   410   415

Trp Thr Ser Arg Glu Lys Leu Arg Asp Tyr Gln Phe Lys Arg Leu Lys
            420   425   430

Tyr Tyr Tyr Ala Val Val Asp Cys Asp Ser Pro Glu Thr Ala Ser Lys
            435   440   445

Ile Tyr Glu Asp Cys Asp Gly Leu Glu Phe Glu Ser Ser Cys Ser Phe
    450   455   460

Ile Asp Leu Arg Phe Ile Pro Asp Asp Ile Thr Phe Asp Asp Glu Pro
465   470   475   480

Lys Asp Val Ala Ser Glu Val Asn Leu Thr Ala Tyr Lys Pro Lys Tyr
            485   490   495

Phe Thr Ser Ala Ala Met Gly Thr Ser Thr Val Glu Ile Thr Trp Asp
        500   505   510

Glu Thr Asp His Glu Arg Ile Thr Met Leu Asn Arg Lys Phe Lys Lys
        515   520   525

Glu Glu Leu Leu Asp Met Asp Phe Gln Ala Tyr Leu Ala Ser Ser Ser
        530   535   540

Glu Asp Glu Glu Glu Ile Glu Glu Glu Leu Gln Gly Asp Asp Gly Val
545   550   555   560

Asn Val Glu Glu Asp Gly Lys Thr Lys Lys Ser Gln Lys Asp Asp Glu
            565   570   575

Glu Gln Ile Ala Lys Tyr Arg Gln Leu Leu Gln Val Ile Gln Glu Lys
            580   585   590

Glu Lys Lys Gly Lys Glu Asn Asp Met Glu Met Glu Ile Lys Trp Val
            595   600   605

Pro Gly Leu Lys Glu Ser Ala Glu Glu Met Val Lys Asn Lys Leu Glu
    610   615   620

Gly Lys Asp Lys Leu Thr Pro Trp Glu Gln Phe Leu Glu Lys Lys Lys
625   630   635   640

Glu Lys Lys Arg Leu Lys Arg Lys Gln Lys Ala Leu Ala Glu Glu Ala
            645   650   655

Ser Glu Glu Glu Leu Pro Ser Asp Val Asp Leu Asn Asp Pro Tyr Phe
        660   665   670

Ala Glu Glu Val Lys Gln Ile Gly Ile Asn Lys Lys Ser Val Lys Ser
    675   680   685

Ala Lys Asp Gly Thr Ser Pro Glu Glu Glu Ile Glu Ile Glu Arg Gln
    690   695   700

Lys Ala Glu Met Ala Leu Leu Met Met Asp Glu Asp Glu Asp Ser Lys
705   710   715   720

Lys His Phe Asn Tyr Asn Lys Ile Val Glu His Gln Asn Leu Ser Lys
            725   730   735

Lys Lys Lys Lys Gln Leu Met Lys Lys Lys Glu Leu Ile Glu Asp Asp

1029

                        740   745   750

    Phe Glu Val Asn Val Asn Asp Ala Arg Phe Gln Ala Met Tyr Thr Ser
            755   760   765

    His Leu Phe Asn Leu Asp Pro Ser Asp Pro Asn Phe Lys Lys Thr Lys
            770   775   780

    Ala Met Glu Lys Ile Leu Glu Glu Lys Ala Arg Gln Arg Glu Arg Lys
    785   790   795   800

    Glu Gln Glu Leu Thr Gln Ala Ile Lys Lys Glu Ser Glu Ile Glu
                    805   810   815

    Lys Glu Ser Gln Arg Lys Ser Ile Asp Pro Ala Leu Ser Met Leu Ile
                820   825   830

    Lys Ser Ile Lys Thr Lys Thr Glu Gln Phe Gln Ala Arg Lys Lys Gln
            835   840   845

    Lys Val Lys
        850

    <210>   2598
    <211>   244
    <212>   PRT
    <213>   Homo sapiens

    <400>   2598

    Met Val Tyr Lys Thr Leu Phe Ala Leu Cys Ile Leu Thr Ala Gly Trp
    1   5   10   15

    Arg Val Gln Ser Leu Pro Thr Ser Ala Pro Leu Ser Val Ser Leu Pro
                20   25   30

    Thr Asn Ile Val Pro Pro Thr Thr Ile Trp Thr Ser Ser Pro Gln Asn
            35   40   45

    Thr Asp Ala Asp Thr Ala Ser Pro Ser Asn Gly Thr His Asn Asn Ser
        50   55   60

    Val Leu Pro Val Thr Ala Ser Ala Pro Thr Ser Leu Leu Pro Lys Asn
    65   70   75   80

    Ile Ser Ile Glu Ser Arg Glu Glu Glu Ile Thr Ser Pro Gly Ser Asn
                85   90   95

                                1030

```
Trp Glu Gly Thr Asn Thr Asp Pro Ser Pro Ser Gly Phe Ser Ser Thr
            100                 105             110

Ser Gly Gly Val His Leu Thr Thr Thr Leu Glu Glu His Ser Leu Gly
        115             120             125

Thr Pro Glu Ala Gly Val Ala Ala Thr Leu Ser Gln Ser Ala Ala Glu
    130             135             140

Pro Pro Thr Leu Ile Ser Pro Gln Ala Pro Ala Ser Ser Pro Ser Ser
145             150             155             160

Leu Ser Thr Ser Pro Pro Glu Val Phe Ser Ala Ser Val Thr Thr Asn
            165             170             175

His Ser Ser Thr Val Thr Ser Thr Gln Pro Thr Gly Ala Pro Thr Ala
            180             185             190

Pro Glu Ser Pro Thr Glu Glu Ser Ser Ser Asp His Thr Pro Thr Ser
        195             200             205

His Ala Thr Ala Glu Pro Val Pro Gln Glu Lys Thr Pro Pro Thr Thr
    210             215             220

Val Ser Gly Lys Val Met Cys Glu Leu Ile Asp Met Glu Thr Pro Pro
225             230             235             240

Pro Phe Pro Gly
```

```
<210>  2599
<211>  395
<212>  PRT
<213>  Homo sapiens

<400>  2599
```

```
Met Pro Gly Arg Ser Cys Val Ala Leu Val Leu Leu Ala Ala Ala Val
1               5               10              15

Ser Cys Ala Val Ala Gln His Ala Pro Pro Trp Thr Glu Asp Cys Arg
            20              25              30

Lys Ser Thr Tyr Pro Pro Ser Gly Pro Thr Tyr Arg Gly Ala Val Pro
        35              40              45

Trp Tyr Thr Ile Asn Leu Asp Leu Pro Pro Tyr Lys Arg Trp His Glu
```

```
            50                      55                      60


Leu Met Leu Asp Lys Ala Pro Met Leu Lys Val Ile Val Asn Ser Leu
65               70              75                  80


Lys Asn Met Ile Asn Thr Phe Val Pro Ser Gly Lys Val Met Gln Val
             85              90                  95


Val Asp Glu Lys Leu Pro Gly Leu Leu Gly Asn Phe Pro Gly Pro Phe
         100             105             110


Glu Glu Glu Met Lys Gly Ile Ala Ala Val Thr Asp Ile Pro Leu Gly
         115             120             125


Glu Ile Ile Ser Phe Asn Ile Phe Tyr Glu Leu Phe Thr Ile Cys Thr
     130             135             140


Ser Ile Val Ala Glu Asp Lys Lys Gly His Leu Ile His Gly Arg Asn
145             150             155             160


Met Asp Phe Gly Val Phe Leu Gly Trp Asn Ile Asn Asn Asp Thr Trp
             165             170             175


Val Ile Thr Glu Gln Leu Lys Pro Leu Thr Val Asn Leu Asp Phe Gln
         180             185             190


Arg Asn Asn Lys Thr Val Phe Lys Ala Ser Ser Phe Ala Gly Tyr Val
         195             200             205


Gly Met Leu Thr Gly Phe Lys Pro Gly Leu Phe Ser Leu Thr Leu Asn
     210             215             220


Glu Arg Phe Ser Ile Asn Gly Gly Tyr Leu Gly Ile Leu Glu Trp Ile
225             230             235             240


Leu Gly Lys Lys Asp Ala Met Trp Ile Gly Phe Leu Thr Arg Thr Val
             245             250             255


Leu Glu Asn Ser Thr Ser Tyr Glu Glu Ala Lys Asn Leu Leu Thr Lys
             260             265             270


Thr Lys Ile Leu Ala Pro Ala Tyr Phe Ile Leu Gly Gly Asn Gln Ser
         275             280             285


Gly Glu Gly Cys Val Ile Thr Arg Asp Arg Lys Glu Ser Leu Asp Val
     290             295             300
```

Tyr Glu Leu Asp Ala Lys Gln Gly Arg Trp Tyr Val Val Gln Thr Asn
305   310   315   320

Tyr Asp Arg Trp Lys His Pro Phe Phe Leu Asp Asp Arg Arg Thr Pro
                325   330   335

Ala Lys Met Cys Leu Asn Arg Thr Ser Gln Glu Asn Ile Ser Phe Glu
                340   345   350

Thr Met Tyr Asp Val Leu Ser Thr Lys Pro Val Leu Asn Lys Leu Thr
            355   360   365

Val Tyr Thr Thr Leu Ile Asp Val Thr Lys Gly Gln Phe Glu Thr Tyr
        370   375   380

Leu Arg Asp Cys Pro Asp Pro Cys Ile Gly Trp
385   390   395

<210>   2600
<211>   282
<212>   PRT
<213>   Homo sapiens

<400>   2600

Met Ser Leu Leu Ala Thr Leu Gly Leu Glu Leu Asp Arg Ala Leu Leu
1   5   10   15

Pro Ala Ser Gly Leu Gly Trp Leu Val Asp Tyr Gly Lys Leu Pro Pro
                20   25   30

Ala Pro Ala Pro Leu Ala Pro Tyr Glu Val Leu Gly Gly Ala Leu Glu
            35   40   45

Gly Gly Leu Pro Val Gly Gly Glu Pro Leu Ala Gly Asp Gly Phe Ser
        50   55   60

Asp Trp Met Thr Glu Arg Val Asp Phe Thr Ala Leu Leu Pro Leu Glu
65   70   75   80

Pro Pro Leu Pro Pro Gly Thr Leu Pro Gln Pro Ser Pro Thr Pro Pro
                85   90   95

Asp Leu Glu Ala Met Ala Ser Leu Leu Lys Lys Glu Leu Glu Gln Met
                100   105   110

```
    Glu Asp Phe Phe Leu Asp Ala Pro Pro Leu Pro Pro Pro Ser Pro Pro
            115             120             125

    Pro Leu Pro Pro Pro Pro Leu Pro Pro Ala Pro Ser Leu Pro Leu Ser
        130             135             140

    Leu Pro Ser Phe Asp Leu Pro Gln Pro Pro Val Leu Asp Thr Leu Asp
    145             150             155             160

    Leu Leu Ala Ile Tyr Cys Arg Asn Glu Ala Gly Gln Glu Glu Val Gly
                    165             170             175

    Met Pro Pro Leu Pro Pro Pro Gln Gln Pro Pro Pro Ser Pro Pro
                    180             185             190

    Gln Pro Ser Arg Leu Ala Pro Tyr Pro His Pro Ala Thr Thr Arg Gly
            195             200             205

    Asp Arg Lys Gln Lys Lys Arg Asp Gln Asn Lys Ser Ala Ala Leu Arg
        210             215             220

    Tyr Arg Gln Arg Lys Arg Ala Glu Gly Glu Ala Leu Glu Gly Glu Cys
    225             230             235             240

    Gln Gly Leu Glu Ala Arg Asn Arg Glu Leu Lys Glu Arg Ala Glu Ser
                    245             250             255

    Val Glu Arg Glu Ile Gln Tyr Val Lys Asp Leu Leu Ile Glu Val Tyr
                    260             265             270

    Lys Ala Arg Ser Gln Arg Thr Arg Ser Cys
            275             280
```

```
<210>  2601
<211>  23
<212>  PRT
<213>  Homo sapiens

<400>  2601

Met Glu Thr Ser Glu Gly Pro Gly Leu Glu Ser Thr Gly Ser Tyr Leu
1               5               10              15

Gly Ile Gln Gln Arg Ser Pro
                20


<210>  2602
<211>  491
```

```
<212>   PRT
<213>   Homo sapiens

<400>   2602

Met Cys Asn Thr Asn Met Ser Val Pro Thr Asp Gly Ala Val Thr Thr
1               5                   10                  15


Ser Gln Ile Pro Ala Ser Glu Gln Glu Thr Leu Val Arg Pro Lys Pro
            20                  25                  30


Leu Leu Leu Lys Leu Leu Lys Ser Val Gly Ala Gln Lys Asp Thr Tyr
        35                  40                  45


Thr Met Lys Glu Val Leu Phe Tyr Leu Gly Gln Tyr Ile Met Thr Lys
    50                  55                  60


Arg Leu Tyr Asp Glu Lys Gln Gln His Ile Val Tyr Cys Ser Asn Asp
65                  70                  75                  80


Leu Leu Gly Asp Leu Phe Gly Val Pro Ser Phe Ser Val Lys Glu His
                85                  90                  95


Arg Lys Ile Tyr Thr Met Ile Tyr Arg Asn Leu Val Val Val Asn Gln
            100                 105                 110


Gln Glu Ser Ser Asp Ser Gly Thr Ser Val Ser Glu Asn Arg Cys His
        115                 120                 125


Leu Glu Gly Gly Ser Asp Gln Lys Asp Leu Val Gln Glu Leu Gln Glu
    130                 135                 140


Glu Lys Pro Ser Ser Ser His Leu Val Ser Arg Pro Ser Thr Ser Ser
145                 150                 155                 160


Arg Arg Arg Ala Ile Ser Glu Thr Glu Glu Asn Ser Asp Glu Leu Ser
                165                 170                 175


Gly Glu Arg Gln Arg Lys Arg His Lys Ser Asp Ser Ile Ser Leu Ser
            180                 185                 190


Phe Asp Glu Ser Leu Ala Leu Cys Val Ile Arg Glu Ile Cys Cys Glu
            195                 200                 205


Arg Ser Ser Ser Ser Glu Ser Thr Gly Thr Pro Ser Asn Pro Asp Leu
        210                 215                 220
```

```
Asp Ala Gly Val Ser Glu His Ser Gly Asp Trp Leu Asp Gln Asp Ser
225                 230                 235                 240

Val Ser Asp Gln Phe Ser Val Glu Phe Glu Val Glu Ser Leu Asp Ser
                245                 250                 255

Glu Asp Tyr Ser Leu Ser Glu Glu Gly Gln Glu Leu Ser Asp Glu Asp
            260                 265                 270

Asp Glu Val Tyr Gln Val Thr Val Tyr Gln Ala Gly Glu Ser Asp Thr
            275                 280                 285

Asp Ser Phe Glu Glu Asp Pro Glu Ile Ser Leu Ala Asp Tyr Trp Lys
        290                 295                 300

Cys Thr Ser Cys Asn Glu Met Asn Pro Pro Leu Pro Ser His Cys Asn
305                 310                 315                 320

Arg Cys Trp Ala Leu Arg Glu Asn Trp Leu Pro Glu Asp Lys Gly Lys
                325                 330                 335

Asp Lys Gly Glu Ile Ser Glu Lys Ala Lys Leu Glu Asn Ser Thr Gln
            340                 345                 350

Ala Glu Glu Gly Phe Asp Val Pro Asp Cys Lys Lys Thr Ile Val Asn
        355                 360                 365

Asp Ser Arg Glu Ser Cys Val Glu Glu Asn Asp Asp Lys Ile Thr Gln
        370                 375                 380

Ala Ser Gln Ser Gln Glu Ser Glu Asp Tyr Ser Gln Pro Ser Thr Ser
385                 390                 395                 400

Ser Ser Ile Ile Tyr Ser Ser Gln Glu Asp Val Lys Glu Phe Glu Arg
                405                 410                 415

Glu Glu Thr Gln Asp Lys Glu Glu Ser Val Glu Ser Ser Leu Pro Leu
            420                 425                 430

Asn Ala Ile Glu Pro Cys Val Ile Cys Gln Gly Arg Pro Lys Asn Gly
            435                 440                 445

Cys Ile Val His Gly Lys Thr Gly His Leu Met Ala Cys Phe Thr Cys
450                 455                 460

Ala Lys Lys Leu Lys Lys Arg Asn Lys Pro Cys Pro Val Cys Arg Gln
```

465   470   475   480

Pro Ile Gln Met Ile Val Leu Thr Tyr Phe Pro
                485   490

<210> 2603
<211> 950
<212> PRT
<213> Homo sapiens

<400> 2603

Met Gly Val Pro Ala Phe Phe Arg Trp Leu Ser Arg Lys Tyr Pro Ser
1   5   10   15

Ile Ile Val Asn Cys Val Glu Glu Lys Pro Lys Glu Cys Asn Gly Val
            20   25   30

Lys Ile Pro Val Asp Ala Ser Lys Pro Asn Pro Asn Asp Val Glu Phe
        35   40   45

Asp Asn Leu Tyr Leu Asp Met Asn Gly Ile Ile His Pro Cys Thr His
    50   55   60

Pro Glu Asp Lys Pro Ala Pro Lys Asn Glu Asp Glu Met Met Val Ala
65   70   75   80

Ile Phe Glu Tyr Ile Asp Arg Leu Phe Ser Ile Val Arg Pro Arg Arg
                85   90   95

Leu Leu Tyr Met Ala Ile Asp Gly Val Ala Pro Arg Ala Lys Met Asn
            100   105   110

Gln Gln Arg Ser Arg Arg Phe Arg Ala Ser Lys Glu Gly Met Glu Ala
        115   120   125

Ala Val Glu Lys Gln Arg Val Arg Glu Glu Ile Leu Ala Lys Gly Gly
    130   135   140

Phe Leu Pro Pro Glu Glu Ile Lys Glu Arg Phe Asp Ser Asn Cys Ile
145   150   155   160

Thr Pro Gly Thr Glu Phe Met Asp Asn Leu Ala Lys Cys Leu Arg Tyr
                165   170   175

Tyr Ile Ala Asp Arg Leu Asn Asn Asp Pro Gly Trp Lys Asn Leu Thr
            180   185   190

```
Val Ile Leu Ser Asp Ala Ser Ala Pro Gly Glu Gly Glu His Lys Ile
        195                 200                 205

Met Asp Tyr Ile Arg Arg Gln Arg Ala Gln Pro Asn His Asp Pro Asn
    210                 215                 220

Thr His His Cys Leu Cys Gly Ala Asp Ala Asp Leu Ile Met Leu Gly
225                 230                 235                 240

Leu Ala Thr His Glu Pro Asn Phe Thr Ile Ile Arg Glu Glu Phe Lys
            245                 250                 255

Pro Asn Lys Pro Lys Pro Cys Gly Leu Cys Asn Gln Phe Gly His Glu
            260                 265                 270

Val Lys Asp Cys Glu Gly Leu Pro Arg Glu Lys Lys Gly Lys His Asp
        275                 280                 285

Glu Leu Ala Asp Ser Leu Pro Cys Ala Glu Gly Glu Phe Ile Phe Leu
290         ╱         295                 300

Arg Leu Asn Val Leu Arg Glu Tyr Leu Glu Arg Glu Leu Thr Met Ala
305                 310                 315                 320

Ser Leu Pro Phe Thr Phe Asp Val Glu Arg Ser Ile Asp Asp Trp Val
            325                 330                 335

Phe Met Cys Phe Phe Val Gly Asn Asp Phe Leu Pro His Leu Pro Ser
            340                 345                 350

Leu Glu Ile Arg Glu Asn Ala Ile Asp Arg Leu Val Asn Ile Tyr Lys
            355                 360                 365

Asn Val Val His Lys Thr Gly Gly Tyr Leu Thr Glu Ser Gly Tyr Val
    370                 375                 380

Asn Leu Gln Arg Val Gln Met Ile Met Leu Ala Val Gly Glu Val Glu
385                 390                 395                 400

Asp Ser Ile Phe Lys Lys Arg Lys Asp Asp Glu Asp Ser Phe Arg Arg
            405                 410                 415

Arg Gln Lys Glu Lys Arg Lys Arg Met Lys Arg Asp Gln Pro Ala Phe
            420                 425                 430
```

1038

```
Thr Pro Ser Gly Ile Leu Thr Pro His Ala Leu Gly Ser Arg Asn Ser
        435                 440                 445

Pro Gly Ser Gln Val Ala Ser Asn Pro Arg Gln Ala Ala Tyr Glu Met
        450                 455                 460

Arg Met Gln Asn Asn Ser Ser Pro Ser Ile Ser Pro Asn Thr Ser Phe
465                 470                 475                 480

Thr Ser Asp Gly Ser Pro Ser Pro Leu Gly Gly Ile Lys Arg Lys Ala
                485                 490                 495

Glu Asp Ser Asp Ser Glu Pro Glu Pro Glu Asp Asn Val Arg Leu Trp
            500                 505                 510

Glu Ala Gly Trp Lys Gln Arg Tyr Tyr Lys Asn Lys Phe Asp Val Asp
        515                 520                 525

Ala Ala Asp Glu Lys Phe Arg Arg Lys Val Val Gln Ser Tyr Val Glu
    530                 535                 540

Gly Leu Cys Trp Val Leu Arg Tyr Tyr Tyr Gln Gly Cys Ala Ser Trp
545                 550                 555                 560

Lys Trp Tyr Tyr Pro Phe His Tyr Ala Pro Phe Ala Ser Asp Phe Glu
            565                 570                 575

Gly Ile Ala Asp Met Pro Ser Asp Phe Glu Lys Gly Thr Lys Pro Phe
            580                 585                 590

Lys Pro Leu Glu Gln Leu Met Gly Val Phe Pro Ala Ala Ser Gly Asn
        595                 600                 605

Phe Leu Pro Pro Ser Trp Arg Lys Leu Met Ser Asp Pro Asp Ser Ser
    610                 615                 620

Ile Ile Asp Phe Tyr Pro Glu Asp Phe Ala Ile Asp Leu Asn Gly Lys
625                 630                 635                 640

Lys Tyr Ala Trp Gln Gly Val Ala Leu Leu Pro Phe Val Asp Glu Arg
            645                 650                 655

Arg Leu Arg Ala Ala Leu Glu Glu Val Tyr Pro Asp Leu Thr Pro Glu
        660                 665                 670

Glu Thr Arg Arg Asn Ser Leu Gly Gly Asp Val Leu Phe Val Gly Lys
```

```
            675                        680                        685


His His Pro Leu His Asp Phe Ile Leu Glu Leu Tyr Gln Thr Gly Ser
     690                    695                    700


Thr Glu Pro Val Glu Val Pro Pro Glu Leu Cys His Gly Ile Gln Gly
705                    710                    715                    720


Lys Phe Ser Leu Asp Glu Glu Ala Ile Leu Pro Asp Gln Ile Val Cys
                    725                    730                    735


Ser Pro Val Pro Met Leu Arg Asp Leu Thr Gln Asn Thr Val Val Ser
                    740                    745                    750


Ile Asn Phe Lys Asp Pro Gln Phe Ala Glu Asp Tyr Ile Phe Lys Ala
               755                    760                    765


Val Met Leu Pro Gly Ala Arg Lys Pro Ala Ala Val Leu Lys Pro Ser
     770                    775                    780


Asp Trp Glu Lys Ser Ser Asn Gly Arg Gln Trp Lys Pro Gln Leu Gly
785                    790                    795                    800


Phe Asn Arg Asp Arg Arg Pro Val His Leu Asp Gln Ala Ala Phe Arg
                    805                    810                    815


Thr Leu Gly His Val Met Pro Arg Gly Ser Gly Thr Gly Ile Tyr Ser
               820                    825                    830


Asn Ala Ala Pro Pro Pro Val Thr Tyr Gln Gly Asn Leu Tyr Arg Pro
               835                    840                    845


Leu Leu Arg Gly Gln Ala Gln Ile Pro Lys Leu Met Ser Asn Met Arg
     850                    855                    860


Pro Gln Asp Ser Trp Arg Gly Pro Pro Pro Leu Phe Gln Gln Gln Arg
865                    870                    875                    880


Phe Asp Arg Gly Val Gly Ala Glu Pro Leu Leu Pro Trp Asn Arg Met
                    885                    890                    895


Leu Gln Thr Gln Asn Ala Ala Phe Gln Pro Asn Gln Tyr Gln Met Leu
               900                    905                    910


Ala Gly Pro Gly Gly Tyr Pro Pro Arg Arg Asp Asp Arg Gly Gly Arg
               915                    920                    925
```

1040

```
Gln Gly Tyr Pro Arg Glu Gly Arg Lys Tyr Pro Leu Pro Pro Pro Ser
    930                 935             940

Gly Arg Tyr Asn Trp Asn
945                 950
```

<210> 2604
<211> 313
<212> PRT
<213> Homo sapiens

<400> 2604

```
Met Ser Gln Ser Arg His Arg Ala Glu Ala Pro Pro Leu Glu Arg Glu
1               5               10              15

Asp Ser Gly Thr Phe Ser Leu Gly Lys Met Ile Thr Ala Lys Pro Gly
            20              25              30

Lys Thr Pro Ile Gln Val Leu His Glu Tyr Gly Met Lys Thr Lys Asn
        35              40              45

Ile Pro Val Tyr Glu Cys Glu Arg Ser Asp Val Gln Ile His Val Pro
    50              55              60

Thr Phe Thr Phe Arg Val Thr Val Gly Asp Ile Thr Cys Thr Gly Glu
65              70              75              80

Gly Thr Ser Lys Lys Leu Ala Lys His Arg Ala Ala Glu Ala Ala Ile
                85              90              95

Asn Ile Leu Lys Ala Asn Ala Ser Ile Cys Phe Ala Val Pro Asp Pro
            100             105             110

Leu Met Pro Asp Pro Ser Lys Gln Pro Lys Asn Gln Leu Asn Pro Ile
        115             120             125

Gly Ser Leu Gln Glu Leu Ala Ile His His Gly Trp Arg Leu Pro Glu
    130             135             140

Tyr Thr Leu Ser Gln Glu Gly Gly Pro Ala His Lys Arg Glu Tyr Thr
145             150             155             160

Thr Ile Cys Arg Leu Glu Ser Phe Met Glu Thr Gly Lys Gly Ala Ser
            165             170             175
```

```
Lys Lys Gln Ala Lys Arg Asn Ala Ala Glu Lys Phe Leu Ala Lys Phe
            180                 185                 190

Ser Asn Ile Ser Pro Glu Asn His Ile Ser Leu Thr Asn Val Val Gly
            195                 200                 205

His Ser Leu Gly Cys Thr Trp His Ser Leu Arg Asn Ser Pro Gly Glu
    210                 215                 220

Lys Ile Asn Leu Leu Lys Arg Ser Leu Leu Ser Ile Pro Asn Thr Asp
225                 230                 235                 240

Tyr Ile Gln Leu Leu Ser Glu Ile Ala Lys Glu Gln Gly Phe Asn Ile
            245                 250                 255

Thr Tyr Leu Asp Ile Asp Glu Leu Ser Ala Asn Gly Gln Tyr Gln Cys
            260                 265                 270

Leu Ala Glu Leu Ser Thr Ser Pro Ile Thr Val Cys His Gly Ser Gly
        275                 280                 285

Ile Ser Cys Gly Asn Ala Gln Ser Asp Ala Ala His Asn Ala Leu Gln
    290                 295                 300

Tyr Leu Lys Ile Ile Ala Glu Arg Lys
305                 310


<210>   2605
<211>   198
<212>   PRT
<213>   Homo sapiens

<400>   2605

Met Ser Asn Val Arg Val Ser Asn Gly Ser Pro Ser Leu Glu Arg Met
1               5                   10                  15

Asp Ala Arg Gln Ala Glu His Pro Lys Pro Ser Ala Cys Arg Asn Leu
            20                  25                  30

Phe Gly Pro Val Asp His Glu Glu Leu Thr Arg Asp Leu Glu Lys His
        35                  40                  45

Cys Arg Asp Met Glu Glu Ala Ser Gln Arg Lys Trp Asn Phe Asp Phe
    50                  55                  60

Gln Asn His Lys Pro Leu Glu Gly Lys Tyr Glu Trp Gln Glu Val Glu
65                  70                  75                  80
```

```
Lys Gly Ser Leu Pro Glu Phe Tyr Tyr Arg Pro Pro Arg Pro Pro Lys
                85                  90                  95

Gly Ala Cys Lys Val Pro Ala Gln Glu Ser Gln Asp Val Ser Gly Ser
                100                 105                 110

Arg Pro Ala Ala Pro Leu Ile Gly Ala Pro Ala Asn Ser Glu Asp Thr
                115                 120                 125

His Leu Val Asp Pro Lys Thr Asp Pro Ser Asp Ser Gln Thr Gly Leu
                130                 135                 140

Ala Glu Gln Cys Ala Gly Ile Arg Lys Arg Pro Ala Thr Asp Asp Ser
145                 150                 155                 160

Ser Thr Gln Asn Lys Arg Ala Asn Arg Thr Glu Glu Asn Val Ser Asp
                165                 170                 175

Gly Ser Pro Asn Ala Gly Ser Val Glu Gln Thr Pro Lys Lys Pro Gly
                180                 185                 190

Leu Arg Arg Arg Gln Thr
            195
```

```
<210>  2606
<211>  727
<212>  PRT
<213>  Homo sapiens

<400>  2606
```

```
Met Arg Pro Leu Leu Leu Leu Ala Leu Leu Gly Trp Leu Leu Leu Ala
1               5                   10                  15

Glu Ala Lys Gly Asp Ala Lys Pro Glu Asp Asn Leu Leu Val Leu Thr
                20                  25                  30

Val Ala Thr Lys Glu Thr Glu Gly Phe Arg Arg Phe Lys Arg Ser Ala
                35                  40                  45

Gln Phe Phe Asn Tyr Lys Ile Gln Ala Leu Gly Leu Gly Glu Asp Trp
50                  55                  60

Asn Val Glu Lys Gly Thr Ser Ala Gly Gly Gly Gln Lys Val Arg Leu
65                  70                  75                  80
```

Leu Lys Lys Ala Leu Glu Lys His Ala Asp Lys Glu Asp Leu Val Ile
            85   90   95

Leu Phe Thr Asp Ser Tyr Asp Val Leu Phe Ala Ser Gly Pro Arg Glu
            100   105   110

Leu Leu Lys Lys Phe Arg Gln Ala Arg Ser Gln Val Val Phe Ser Ala
            115   120   125

Glu Glu Leu Ile Tyr Pro Asp Arg Arg Leu Glu Thr Lys Tyr Pro Val
    130   135   140

Val Ser Asp Gly Lys Arg Phe Leu Gly Ser Gly Gly Phe Ile Gly Tyr
145   150   155   160

Ala Pro Asn Leu Ser Lys Leu Val Ala Glu Trp Glu Gly Gln Asp Ser
                165   170   175

Asp Ser Asp Gln Leu Phe Tyr Thr Lys Ile Phe Leu Asp Pro Glu Lys
            180   185   190

Arg Glu Gln Ile Asn Ile Thr Leu Asp His Arg Cys Arg Ile Phe Gln
            195   200   205

Asn Leu Asp Gly Ala Leu Asp Glu Val Val Leu Lys Phe Glu Met Gly
210   215   220

His Val Arg Ala Arg Asn Leu Ala Tyr Asp Thr Leu Pro Val Leu Ile
225   230   235   240

His Gly Asn Gly Pro Thr Lys Leu Gln Leu Asn Tyr Leu Gly Asn Tyr
                245   250   255

Ile Pro Arg Phe Trp Thr Phe Glu Thr Gly Cys Thr Val Cys Asp Glu
            260   265   270

Gly Leu Arg Ser Leu Lys Gly Ile Gly Asp Glu Ala Leu Pro Thr Val
            275   280   285

Leu Val Gly Val Phe Ile Glu Gln Pro Thr Pro Phe Val Ser Leu Phe
    290   295   300

Phe Gln Arg Leu Leu Arg Leu His Tyr Pro Gln Lys His Met Arg Leu
305   310   315   320

Phe Ile His Asn His Glu Gln His His Lys Ala Gln Val Glu Glu Phe

                    325   330   335

    Leu Ala Gln His Gly Ser Glu Tyr Gln Ser Val Lys Leu Val Gly Pro
                340   345   350

    Glu Val Arg Met Ala Asn Ala Asp Ala Arg Asn Met Gly Ala Asp Leu
            355   360   365

    Cys Arg Gln Asp Arg Ser Cys Thr Tyr Tyr Phe Ser Val Asp Ala Asp
        370   375   380

    Val Ala Leu Thr Glu Pro Asn Ser Leu Arg Leu Leu Ile Gln Gln Asn
    385   390   395   400

    Lys Asn Val Ile Ala Pro Leu Met Thr Arg His Gly Arg Leu Trp Ser
                405   410   415

    Asn Phe Trp Gly Ala Leu Ser Ala Asp Gly Tyr Tyr Ala Arg Ser Glu
                420   425   430

    Asp Tyr Val Asp Ile Val Gln Gly Arg Arg Val Gly Val Trp Asn Val
            435   440   445

    Pro Tyr Ile Ser Asn Ile Tyr Leu Ile Lys Gly Ser Ala Leu Arg Gly
        450   455   460

    Glu Leu Gln Ser Ser Asp Leu Phe His His Ser Lys Leu Asp Pro Asp
    465   470   475   480

    Met Ala Phe Cys Ala Asn Ile Arg Gln Gln Asp Val Phe Met Phe Leu
                485   490   495

    Thr Asn Arg His Thr Leu Gly His Leu Leu Ser Leu Asp Ser Tyr Arg
                500   505   510

    Thr Thr His Leu His Asn Asp Leu Trp Glu Val Phe Ser Asn Pro Glu
        515   520   525

    Asp Trp Lys Glu Lys Tyr Ile His Gln Asn Tyr Thr Lys Ala Leu Ala
        530   535   540

    Gly Lys Leu Val Glu Thr Pro Cys Pro Asp Val Tyr Trp Phe Pro Ile
    545   550   555   560

    Phe Thr Glu Val Ala Cys Asp Glu Leu Val Glu Glu Met Glu His Phe
                565   570   575

                                1045

```
Gly Gln Trp Ser Leu Gly Asn Asn Lys Asp Asn Arg Ile Gln Gly Gly
        580               585                 590


Tyr Glu Asn Val Pro Thr Ile Asp Ile His Met Asn Gln Ile Gly Phe
        595               600                 605


Glu Arg Glu Trp His Lys Phe Leu Leu Glu Tyr Ile Ala Pro Met Thr
    610               615                 620


Glu Lys Leu Tyr Pro Gly Tyr Tyr Thr Arg Ala Gln Phe Asp Leu Ala
625               630                 635                 640


Phe Val Val Arg Tyr Lys Pro Asp Glu Gln Pro Ser Leu Met Pro His
            645               650                 655


His Asp Ala Ser Thr Phe Thr Ile Asn Ile Ala Leu Asn Arg Val Gly
            660               665                 670


Val Asp Tyr Glu Gly Gly Gly Cys Arg Phe Leu Arg Tyr Asn Cys Ser
        675               680                 685


Ile Arg Ala Pro Arg Lys Gly Trp Thr Leu Met His Pro Gly Arg Leu
    690               695                 700


Thr His Tyr His Glu Gly Leu Pro Thr Thr Arg Gly Thr Arg Tyr Ile
705               710                 715                 720


Ala Val Ser Phe Val Asp Pro
                725
```

```
<210>   2607
<211>   537
<212>   PRT
<213>   Homo sapiens

<400>   2607
```

```
Met Ala Trp Arg Gly Ala Gly Pro Ser Val Pro Gly Ala Pro Gly Gly
1               5                   10                  15


Val Gly Leu Ser Leu Gly Leu Leu Leu Gln Leu Leu Leu Leu Leu Gly
            20                  25                  30


Pro Ala Arg Gly Phe Gly Asp Glu Glu Glu Arg Arg Cys Asp Pro Ile
        35                  40                  45
```

Arg Ile Ser Met Cys Gln Asn Leu Gly Tyr Asn Val Thr Lys Met Pro
    50   55   60

Asn Leu Val Gly His Glu Leu Gln Thr Asp Ala Glu Leu Gln Leu Thr
65   70   75   80

Thr Phe Thr Pro Leu Ile Gln Tyr Gly Cys Ser Ser Gln Leu Gln Phe
                85   90   95

Phe Leu Cys Ser Val Tyr Val Pro Met Cys Thr Glu Lys Ile Asn Ile
            100   105   110

Pro Ile Gly Pro Cys Gly Gly Met Cys Leu Ser Val Lys Arg Arg Cys
        115   120   125

Glu Pro Val Leu Lys Glu Phe Gly Phe Ala Trp Pro Glu Ser Leu Asn
    130   135   140

Cys Ser Lys Phe Pro Pro Gln Asn Asp His Asn His Met Cys Met Glu
145   150   155   160

Gly Pro Gly Asp Glu Glu Val Pro Leu Pro His Lys Thr Pro Ile Gln
                165   170   175

Pro Gly Glu Glu Cys His Ser Val Gly Thr Asn Ser Asp Gln Tyr Ile
            180   185   190

Trp Val Lys Arg Ser Leu Asn Cys Val Leu Lys Cys Gly Tyr Asp Ala
        195   200   205

Gly Leu Tyr Ser Arg Ser Ala Lys Glu Phe Thr Asp Ile Trp Met Ala
    210   215   220

Val Trp Ala Ser Leu Cys Phe Ile Ser Thr Ala Phe Thr Val Leu Thr
225   230   235   240

Phe Leu Ile Asp Ser Ser Arg Phe Ser Tyr Pro Glu Arg Pro Ile Ile
                245   250   255

Phe Leu Ser Met Cys Tyr Asn Ile Tyr Ser Ile Ala Tyr Ile Val Arg
            260   265   270

Leu Thr Val Gly Arg Glu Arg Ile Ser Cys Asp Phe Glu Glu Ala Ala
    275   280   285

Glu Pro Val Leu Ile Gln Glu Gly Leu Lys Asn Thr Gly Cys Ala Ile

```
                    290                      295                      300
```

```
    Ile Phe Leu Leu Met Tyr Phe Phe Gly Met Ala Ser Ser Ile Trp Trp
    305                   310                   315                   320
```

```
    Val Ile Leu Thr Leu Thr Trp Phe Leu Ala Ala Gly Leu Lys Trp Gly
                          325                   330                   335
```

```
    His Glu Ala Ile Glu Met His Ser Ser Tyr Phe His Ile Ala Ala Trp
                          340                   345                   350
```

```
    Ala Ile Pro Ala Val Lys Thr Ile Val Ile Leu Ile Met Arg Leu Val
                          355                   360                   365
```

```
    Asp Ala Asp Glu Leu Thr Gly Leu Cys Tyr Val Gly Asn Gln Asn Leu
                          370                   375                   380
```

```
    Asp Ala Leu Thr Gly Phe Val Val Ala Pro Leu Phe Thr Tyr Leu Val
    385                   390                   395                   400
```

```
    Ile Gly Thr Leu Phe Ile Ala Ala Gly Leu Val Ala Leu Phe Lys Ile
                          405                   410                   415
```

```
    Arg Ser Asn Leu Gln Lys Asp Gly Thr Lys Thr Asp Lys Leu Glu Arg
                          420                   425                   430
```

```
    Leu Met Val Lys Ile Gly Val Phe Ser Val Leu Tyr Thr Val Pro Ala
                          435                   440                   445
```

```
    Thr Cys Val Ile Ala Cys Tyr Phe Tyr Glu Ile Ser Asn Trp Ala Leu
    450                   455                   460
```

```
    Phe Arg Tyr Ser Ala Asp Asp Ser Asn Met Ala Val Glu Met Leu Lys
    465                   470                   475                   480
```

```
    Ile Phe Met Ser Leu Leu Val Gly Ile Thr Ser Gly Met Trp Ile Trp
                          485                   490                   495
```

```
    Ser Ala Lys Thr Leu His Thr Trp Gln Lys Cys Ser Asn Arg Leu Val
                          500                   505                   510
```

```
    Asn Ser Gly Lys Val Lys Arg Glu Lys Arg Gly Asn Gly Trp Val Lys
                  515                   520                   525
```

```
    Pro Gly Lys Gly Ser Glu Thr Val Val
          530                   535
```

```
<210>   2608
<211>   362
<212>   PRT
<213>   Homo sapiens

<400>   2608
```

Met Leu Val Met Ala Pro Arg Thr Val Leu Leu Leu Leu Ser Ala Ala
1   5   10   15

Leu Ala Leu Thr Glu Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe
            20   25   30

Tyr Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser
        35   40   45

Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala
    50   55   60

Ala Ser Pro Arg Glu Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly
65   70   75   80

Pro Glu Tyr Trp Asp Arg Asn Thr Gln Ile Tyr Lys Ala Gln Ala Gln
                85   90   95

Thr Asp Arg Glu Ser Leu Arg Asn Leu Arg Gly Tyr Tyr Asn Gln Ser
            100   105   110

Glu Ala Gly Ser His Thr Leu Gln Ser Met Tyr Gly Cys Asp Val Gly
            115   120   125

Pro Asp Gly Arg Leu Leu Arg Gly His Asp Gln Tyr Ala Tyr Asp Gly
    130   135   140

Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala
145   150   155   160

Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys Trp Glu Ala Ala Arg Glu
                165   170   175

Ala Glu Gln Arg Arg Ala Tyr Leu Glu Gly Glu Cys Val Glu Trp Leu
            180   185   190

Arg Arg Tyr Leu Glu Asn Gly Lys Asp Lys Leu Glu Arg Ala Asp Pro
            195   200   205

Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu Ala Thr
    210   215   220

Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr
225   230   235   240

Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu
                245   250   255

Thr Arg Pro Ala Gly Asp Arg Thr Phe Gln Lys Trp Ala Ala Val Val
            260   265   270

Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu
        275   280   285

Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Pro Ser Ser Gln Ser
    290   295   300

Thr Val Pro Ile Val Gly Ile Val Ala Gly Leu Ala Val Leu Ala Val
305   310   315   320

Val Val Ile Gly Ala Val Val Ala Ala Val Met Cys Arg Arg Lys Ser
                325   330   335

Ser Gly Gly Lys Gly Gly Ser Tyr Ser Gln Ala Ala Cys Ser Asp Ser
            340   345   350

Ala Gln Gly Ser Asp Val Ser Leu Thr Ala
        355   360

<210> 2609
<211> 350
<212> PRT
<213> Homo sapiens

<400> 2609

Met Glu Thr Asn Ser Ser Leu Pro Thr Asn Ile Ser Gly Gly Thr Pro
1   5   10   15

Ala Val Ser Ala Gly Tyr Leu Phe Leu Asp Ile Ile Thr Tyr Leu Val
            20   25   30

Phe Ala Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile
        35   40   45

Trp Val Ala Gly Phe Arg Met Thr His Thr Val Thr Thr Ile Ser Tyr
    50   55   60

1050

Leu Asn Leu Ala Val Ala Asp Phe Cys Phe Thr Ser Thr Leu Pro Phe
65   70   75   80

Phe Met Val Arg Lys Ala Met Gly Gly His Trp Pro Phe Gly Trp Phe
              85   90   95

Leu Cys Lys Phe Val Phe Thr Ile Val Asp Ile Asn Leu Phe Gly Ser
             100   105   110

Val Phe Leu Ile Ala Leu Ile Ala Leu Asp Arg Cys Val Cys Val Leu
         115   120   125

His Pro Val Trp Thr Gln Asn His Arg Thr Val Ser Leu Ala Lys Lys
     130   135   140

Val Ile Ile Gly Pro Trp Val Met Ala Leu Leu Leu Thr Leu Pro Val
145   150   155   160

Ile Ile Arg Val Thr Thr Val Pro Gly Lys Thr Gly Thr Val Ala Cys
             165   170   175

Thr Phe Asn Phe Ser Pro Trp Thr Asn Asp Pro Lys Glu Arg Ile Asn
             180   185   190

Val Ala Val Ala Met Leu Thr Val Arg Gly Ile Ile Arg Phe Ile Ile
         195   200   205

Gly Phe Ser Ala Pro Met Ser Ile Val Ala Val Ser Tyr Gly Leu Ile
     210   215   220

Ala Thr Lys Ile His Lys Gln Gly Leu Ile Lys Ser Ser Arg Pro Leu
225   230   235   240

Arg Val Leu Ser Phe Val Ala Ala Phe Phe Leu Cys Trp Ser Pro
             245   250   255

Tyr Gln Val Val Ala Leu Ile Ala Thr Val Arg Ile Arg Glu Leu Leu
             260   265   270

Gln Gly Met Tyr Lys Glu Ile Gly Ile Ala Val Asp Val Thr Ser Ala
         275   280   285

Leu Ala Phe Phe Asn Ser Cys Leu Asn Pro Met Leu Tyr Val Phe Met
     290   295   300

1051

Gly Gln Asp Phe Arg Glu Arg Leu Ile His Ala Leu Pro Ala Ser Leu
305   310   315   320

Glu Arg Ala Leu Thr Glu Asp Ser Thr Gln Thr Ser Asp Thr Ala Thr
                325   330   335

Asn Ser Thr Leu Pro Ser Ala Glu Val Glu Leu Gln Ala Lys
                340   345   350

<210> 2610
<211> 638
<212> PRT
<213> Homo sapiens

<400> 2610

Met Ser Ala Ser Ser Ser Gly Gly Ser Pro Arg Phe Pro Ser Cys Gly
1   5   10   15

Lys Asn Gly Val Thr Ser Leu Thr Gln Lys Lys Val Leu Arg Ala Pro
                20   25   30

Cys Gly Ala Pro Ser Val Thr Val Thr Lys Ser His Lys Arg Gly Met
                35   40   45

Lys Gly Asp Thr Val Asn Val Arg Arg Ser Val Arg Val Lys Thr Lys
        50   55   60

Asn Pro Pro His Cys Leu Glu Ile Thr Pro Pro Ser Ser Glu Lys Leu
65   70   75   80

Val Ser Val Met Arg Leu Ser Asp Leu Ser Thr Glu Asp Asp Asp Ser
                85   90   95

Gly His Cys Lys Met Asn Arg Tyr Asp Lys Lys Ile Asp Ser Leu Met
                100   105   110

Asn Ala Val Gly Cys Leu Lys Ser Glu Val Lys Met Gln Lys Gly Glu
        115   120   125

Arg Gln Met Ala Lys Arg Phe Leu Glu Glu Arg Lys Glu Glu Leu Glu
        130   135   140

Glu Val Ala His Glu Leu Ala Glu Thr Glu His Glu Asn Thr Val Leu
145   150   155   160

Arg His Asn Ile Glu Arg Met Lys Glu Glu Lys Asp Phe Thr Ile Leu

                              165   170   175

Gln Lys Lys His Leu Gln Gln Glu Lys Glu Cys Leu Met Ser Lys Leu
            180   185   190

Val Glu Ala Glu Met Asp Gly Ala Ala Ala Lys Gln Val Met Ala
            195   200   205

Leu Lys Asp Thr Ile Gly Lys Leu Lys Thr Glu Lys Gln Met Thr Cys
            210   215   220

Thr Asp Ile Asn Thr Leu Thr Arg Gln Lys Glu Leu Leu Leu Gln Lys
225   230   235   240

Leu Ser Thr Phe Glu Glu Thr Asn Arg Thr Leu Arg Asp Leu Leu Arg
                245   250   255

Glu Gln His Cys Lys Glu Asp Ser Glu Arg Leu Met Glu Gln Gln Gly
            260   265   270

Ala Leu Leu Lys Arg Leu Ala Glu Ala Asp Ser Glu Lys Ala Arg Leu
            275   280   285

Leu Leu Leu Leu Gln Asp Lys Asp Lys Glu Val Glu Glu Leu Leu Gln
            290   295   300

Glu Ile Gln Cys Glu Lys Ala Gln Ala Lys Thr Ala Ser Glu Leu Ser
305   310   315   320

Lys Ser Met Glu Ser Met Arg Gly His Leu Gln Ala Gln Leu Arg Ser
                325   330   335

Lys Glu Ala Glu Asn Ser Arg Leu Cys Met Gln Ile Lys Asn Leu Glu
            340   345   350

Arg Ser Gly Asn Gln His Lys Ala Glu Val Glu Ala Ile Met Glu Gln
            355   360   365

Leu Lys Glu Leu Lys Gln Lys Gly Asp Arg Asp Lys Glu Ser Leu Lys
            370   375   380

Lys Ala Ile Arg Ala Gln Lys Glu Arg Ala Glu Lys Ser Glu Glu Tyr
385   390   395   400

Ala Glu Gln Leu His Val Gln Leu Ala Asp Lys Asp Leu Tyr Val Ala
                405   410   415

```
Glu Ala Leu Ser Thr Leu Glu Ser Trp Arg Ser Arg Tyr Asn Gln Val
            420                 425             430

Val Lys Glu Lys Gly Asp Leu Glu Leu Glu Ile Ile Val Leu Asn Asp
            435                 440             445

Arg Val Thr Asp Leu Val Asn Gln Gln Gln Thr Leu Glu Glu Lys Met
    450                 455             460

Arg Glu Asp Arg Asp Ser Leu Val Glu Arg Leu His Arg Gln Thr Ala
465                 470             475                 480

Glu Tyr Ser Ala Phe Lys Leu Glu Asn Glu Arg Leu Lys Ala Ser Phe
                485                 490                 495

Ala Pro Met Glu Asp Lys Leu Asn Gln Ala His Leu Glu Val Gln Gln
            500                 505             510

Leu Lys Ala Ser Val Lys Asn Tyr Glu Gly Met Ile Asp Asn Tyr Lys
            515                 520             525

Ser Gln Val Met Lys Thr Arg Leu Glu Ala Asp Glu Val Ala Ala Gln
    530                 535             540

Leu Glu Arg Cys Asp Lys Glu Asn Lys Ile Leu Lys Asp Glu Met Asn
545                 550             555                 560

Lys Glu Ile Glu Ala Ala Arg Arg Gln Phe Gln Ser Gln Leu Ala Asp
                565                 570             575

Leu Gln Gln Leu Pro Asp Ile Leu Lys Ile Thr Glu Ala Lys Leu Ala
            580                 585             590

Glu Cys Gln Asp Gln Leu Gln Gly Tyr Glu Arg Lys Asn Ile Asp Leu
            595                 600             605

Thr Ala Ile Ile Ser Asp Leu Arg Ser Arg Val Arg Asp Trp Gln Lys
    610                 615             620

Gly Ser His Glu Leu Thr Arg Ala Gly Ala Arg Ile Pro Arg
625                 630             635

<210>   2611
<211>   197
<212>   PRT
```

<213> Homo sapiens

<400>   2611

```
Met Thr Leu Leu Pro Gly Leu Leu Phe Leu Thr Trp Leu His Thr Cys
1               5                   10                  15


Leu Ala His His Asp Pro Ser Leu Arg Gly His Pro His Ser His Gly
            20                  25                  30


Thr Pro His Cys Tyr Ser Ala Glu Glu Leu Pro Leu Gly Gln Ala Pro
            35                  40                  45


Pro His Leu Leu Ala Arg Gly Ala Lys Trp Gly Gln Ala Leu Pro Val
    50                  55                  60


Ala Leu Val Ser Ser Leu Glu Ala Ala Ser His Arg Gly Arg His Glu
65                  70                  75                  80


Arg Pro Ser Ala Thr Thr Gln Cys Pro Val Leu Arg Pro Glu Glu Val
            85                  90                  95


Leu Glu Ala Asp Thr His Gln Arg Ser Ile Ser Pro Trp Arg Tyr Arg
            100                 105                 110


Val Asp Thr Asp Glu Asp Arg Tyr Pro Gln Lys Leu Ala Phe Ala Glu
            115                 120                 125


Cys Leu Cys Arg Gly Cys Ile Asp Ala Arg Thr Gly Arg Glu Thr Ala
    130                 135                 140


Ala Leu Asn Ser Val Arg Leu Leu Gln Ser Leu Leu Val Leu Arg Arg
145                 150                 155                 160


Arg Pro Cys Ser Arg Asp Gly Ser Gly Leu Pro Thr Pro Gly Ala Phe
            165                 170                 175


Ala Phe His Thr Glu Phe Ile His Val Pro Val Gly Cys Thr Cys Val
            180                 185                 190


Leu Pro Arg Ser Val
            195
```

<210>   2612
<211>   570
<212>   PRT
<213>   Homo sapiens

<400> 2612

```
Met Asn Val Val Phe Ala Val Lys Gln Tyr Ile Ser Lys Met Ile Glu
1               5                  10                  15

Asp Ser Gly Pro Gly Met Lys Val Leu Leu Met Asp Lys Glu Thr Thr
            20                  25                  30

Gly Ile Val Ser Met Val Tyr Thr Gln Ser Glu Ile Leu Gln Lys Glu
            35                  40                  45

Val Tyr Leu Phe Glu Arg Ile Asp Ser Gln Asn Arg Glu Ile Met Lys
    50                  55                  60

His Leu Lys Ala Ile Cys Phe Leu Arg Pro Thr Lys Glu Asn Val Asp
65                  70                  75                  80

Tyr Ile Ile Gln Glu Leu Arg Arg Pro Lys Tyr Thr Ile Tyr Phe Ile
                85                  90                  95

Tyr Phe Ser Asn Val Ile Ser Lys Ser Asp Val Lys Ser Leu Ala Glu
            100                 105                 110

Ala Asp Glu Gln Glu Val Val Ala Glu Val Gln Glu Phe Tyr Gly Asp
        115                 120                 125

Tyr Ile Ala Val Asn Pro His Leu Phe Ser Leu Asn Ile Leu Gly Cys
    130                 135                 140

Cys Gln Gly Arg Asn Trp Asp Pro Ala Gln Leu Ser Arg Thr Thr Gln
145                 150                 155                 160

Gly Leu Thr Ala Leu Leu Leu Ser Leu Lys Lys Cys Pro Met Ile Arg
                165                 170                 175

Tyr Gln Leu Ser Ser Glu Ala Ala Lys Arg Leu Ala Glu Cys Val Lys
            180                 185                 190

Gln Val Ile Thr Lys Glu Tyr Glu·Leu Phe Glu Phe Arg Arg Thr Glu
            195                 200                 205

Val Pro Pro Leu Leu Leu Ile Leu Asp Arg Cys Asp Asp Ala Ile Thr
    210                 215                 220

Pro Leu Leu Asn Gln Trp Thr Tyr Gln Ala Met Val His Glu Leu Leu
225                 230                 235                 240
```

Gly Ile Asn Asn Asn Arg Ile Asp Leu Ser Arg Val Pro Gly Ile Ser
            245   250   255

Lys Asp Leu Arg Glu Val Val Leu Ser Ala Glu Asn Asp Glu Phe Tyr
        260   265   270

Ala Asn Asn Met Tyr Leu Asn Phe Ala Glu Ile Gly Ser Asn Ile Lys
        275   280   285

Asn Leu Met Glu Asp Phe Gln Lys Lys Pro Lys Glu Gln Gln Lys
    290   295   300

Leu Glu Ser Ile Ala Asp Met Lys Ala Phe Val Glu Asn Tyr Pro Gln
305   310   315   320

Phe Lys Lys Met Ser Gly Thr Val Ser Lys His Val Thr Val Val Gly
            325   330   335

Glu Leu Ser Arg Leu Val Ser Glu Arg Asn Leu Leu Glu Val Ser Glu
        340   345   350

Val Glu Gln Glu Leu Ala Cys Gln Asn Asp His Ser Ser Ala Leu Gln
        355   360   365

Asn Ile Lys Arg Leu Leu Gln Asn Pro Lys Val Thr Glu Phe Asp Ala
    370   375   380

Ala Arg Leu Val Met Leu Tyr Ala Leu His Tyr Glu Arg His Ser Ser
385   390   395   400

Asn Ser Leu Pro Gly Leu Met Met Asp Leu Arg Asn Lys Gly Val Ser
            405   410   415

Glu Lys Tyr Arg Lys Leu Val Ser Ala Val Val Glu Tyr Gly Gly Lys
        420   425   430

Arg Val Arg Gly Ser Asp Leu Phe Ser Pro Lys Asp Ala Val Ala Ile
        435   440   445

Thr Lys Gln Phe Leu Lys Gly Leu Lys Gly Val Glu Asn Val Tyr Thr
    450   455   460

Gln His Gln Pro Phe Leu His Glu Thr Leu Asp His Leu Ile Lys Gly
465   470   475   480

Arg Leu Lys Glu Asn Leu Tyr Pro Tyr Leu Gly Pro Ser Thr Leu Arg
              485   490   495

Asp Arg Pro Gln Asp Ile Ile Val Phe Val Ile Gly Gly Ala Thr Tyr
              500   505   510

Glu Glu Ala Leu Thr Val Tyr Asn Leu Asn Arg Thr Thr Pro Gly Val
              515   520   525

Arg Ile Val Leu Gly Gly Thr Thr Val His Asn Thr Lys Ser Phe Leu
              530   535   540

Glu Glu Val Leu Ala Ser Gly Leu His Ser Arg Ser Lys Glu Ser Ser
545   550   555   560

Gln Val Thr Ser Arg Ser Ala Ser Arg Arg
              565   570

<210> 2613
<211> 474
<212> PRT
<213> Homo sapiens

<400> 2613

Met Thr Ile Leu Thr Tyr Pro Phe Lys Asn Leu Pro Thr Ala Ser Lys
1   5   10   15

Trp Ala Leu Arg Phe Ser Ile Arg Pro Leu Ser Cys Ser Ser Gln Leu
              20   25   30

Arg Ala Ala Pro Ala Val Gln Thr Lys Thr Lys Lys Thr Leu Ala Lys
              35   40   45

Pro Asn Ile Arg Asn Val Val Val Val Asp Gly Val Arg Thr Pro Phe
    50   55   60

Leu Leu Ser Gly Thr Ser Tyr Lys Asp Leu Met Pro His Asp Leu Ala
65   70   75   80

Arg Ala Ala Leu Thr Gly Leu Leu His Arg Thr Ser Val Pro Lys Glu
              85   90   95

Val Val Asp Tyr Ile Ile Phe Gly Thr Val Ile Gln Glu Val Lys Thr
              100   105   110

Ser Asn Val Ala Arg Glu Ala Ala Leu Gly Ala Gly Phe Ser Asp Lys
    115   120   125

Thr Pro Ala His Thr Val Thr Met Ala Cys Ile Ser Ala Asn Gln Ala
    130   135   140

Met Thr Thr Gly Val Gly Leu Ile Ala Ser Gly Gln Cys Asp Val Ile
145   150   155   160

Val Ala Gly Gly Val Glu Leu Met Ser Asp Val Pro Ile Arg His Ser
                165   170   175

Arg Lys Met Arg Lys Leu Met Leu Asp Leu Asn Lys Ala Lys Ser Met
            180   185   190

Gly Gln Arg Leu Ser Leu Ile Ser Lys Phe Arg Phe Asn Phe Leu Ala
            195   200   205

Pro Glu Leu Pro Ala Val Ser Glu Phe Ser Thr Ser Glu Thr Met Gly
    210   215   220

His Ser Ala Asp Arg Leu Ala Ala Ala Phe Ala Val Ser Arg Leu Glu
225   230   235   240

Gln Asp Glu Tyr Ala Leu Arg Ser His Ser Leu Ala Lys Lys Ala Gln
            245   250   255

Asp Glu Gly Leu Leu Ser Asp Val Val Pro Phe Lys Val Pro Gly Lys
            260   265   270

Asp Thr Val Thr Lys Asp Asn Gly Ile Arg Pro Ser Ser Leu Glu Gln
    275   280   285

Met Ala Lys Leu Lys Pro Ala Phe Ile Lys Pro Tyr Gly Thr Val Thr
    290   295   300

Ala Ala Asn Ser Ser Phe Leu Thr Asp Gly Ala Ser Ala Met Leu Ile
305   310   315   320

Met Ala Glu Glu Lys Ala Leu Ala Met Gly Tyr Lys Pro Lys Ala Tyr
            325   330   335

Leu Arg Asp Phe Met Tyr Val Ser Gln Asp Pro Lys Asp Gln Leu Leu
            340   345   350

Leu Gly Pro Thr Tyr Ala Thr Pro Lys Val Leu Glu Lys Ala Gly Leu
            355   360   365

```
Thr Met Asn Asp Ile Asp Ala Phe Glu Phe His Glu Ala Phe Ser Gly
    370             375             380
```

```
Gln Ile Leu Ala Asn Phe Lys Ala Met Asp Ser Asp Trp Phe Ala Glu
385             390             395             400
```

```
Asn Tyr Met Gly Arg Lys Thr Lys Val Gly Leu Pro Pro Leu Glu Lys
            405             410             415
```

```
Phe Asn Asn Trp Gly Gly Ser Leu Ser Leu Gly His Pro Phe Gly Ala
            420             425             430
```

```
Thr Gly Cys Arg Leu Val Met Ala Ala Ala Asn Arg Leu Arg Lys Glu
        435             440             445
```

```
Gly Gly Gln Tyr Gly Leu Val Ala Ala Cys Ala Ala Gly Gly Gln Gly
    450             455             460
```

```
His Ala Met Ile Val Glu Ala Tyr Pro Lys
465             470
```

```
<210>   2614
<211>   793
<212>   PRT
<213>   Homo sapiens
```

```
<400>   2614
```

```
Met Glu Ser Arg Ala Glu Gly Gly Ser Pro Ala Val Phe Asp Trp Phe
1               5               10              15
```

```
Phe Glu Ala Ala Cys Pro Ala Ser Leu Gln Glu Asp Pro Pro Ile Leu
            20              25              30
```

```
Arg Gln Phe Pro Pro Asp Phe Arg Asp Gln Glu Ala Met Gln Met Val
        35              40              45
```

```
Pro Lys Phe Cys Phe Pro Phe Asp Val Glu Arg Glu Pro Pro Ser Pro
    50              55              60
```

```
Ala Val Gln His Phe Thr Phe Ala Leu Thr Asp Leu Ala Gly Asn Arg
65              70              75              80
```

```
Arg Phe Gly Phe Cys Arg Leu Arg Ala Gly Thr Gln Ser Cys Leu Cys
            85              90              95
```

```
Ile Leu Ser His Leu Pro Trp Phe Glu Val Phe Tyr Lys Leu Leu Asn
```

```
                 100                    105                     110


    Thr Val Gly Asp Leu Leu Ala Gln Asp Gln Val Thr Glu Ala Glu Glu
            115                 120                 125


    Leu Leu Gln Asn Leu Phe Gln Gln Ser Leu Ser Gly Pro Gln Ala Ser
            130                 135                 140


    Val Gly Leu Glu Leu Gly Ser Gly Val Thr Val Ser Ser Gly Gln Gly
    145                 150                 155                 160


    Ile Pro Pro Pro Thr Arg Gly Asn Ser Lys Pro Leu Ser Cys Phe Val
                    165                 170                 175


    Ala Pro Asp Ser Gly Arg Leu Pro Ser Ile Pro Glu Asn Arg Asn Leu
                180                 185                 190


    Thr Glu Leu Val Val Ala Val Thr Asp Glu Asn Ile Val Gly Leu Phe
            195                 200                 205


    Ala Ala Leu Leu Ala Glu Arg Arg Val Leu Leu Thr Ala Ser Lys Leu
    210                 215                 220


    Ser Thr Leu Thr Ser Cys Val His Ala Ser Cys Ala Leu Leu Tyr Pro
    225                 230                 235                 240


    Met Arg Trp Glu His Val Leu Ile Pro Thr Leu Pro Pro His Leu Leu
                    245                 250                 255


    Asp Tyr Cys Cys Ala Pro Met Pro Tyr Leu Ile Gly Val His Ala Ser
                260                 265                 270


    Leu Ala Glu Arg Val Arg Glu Lys Ala Leu Glu Asp Val Val Val Leu
                275                 280                 285


    Asn Val Asp Ala Asn Thr Leu Glu Thr Thr Phe Asn Asp Val Gln Ala
        290                 295                 300


    Leu Pro Pro Asp Val Val Ser Leu Leu Arg Leu Arg Leu Arg Lys Val
    305                 310                 315                 320


    Ala Leu Ala Pro Gly Glu Gly Val Ser Arg Leu Phe Leu Lys Ala Gln
                    325                 330                 335


    Ala Leu Leu Phe Gly Gly Tyr Arg Asp Ala Leu Val Cys Ser Pro Gly
                    340                 345                 350
```

```
Gln Pro Val Thr Phe Ser Glu Glu Val Phe Leu Ala Gln Lys Pro Gly
        355             360             365

Ala Pro Leu Gln Ala Phe His Arg Arg Ala Val His Leu Gln Leu Phe
    370             375             380

Lys Gln Phe Ile Glu Ala Arg Leu Glu Lys Leu Asn Lys Gly Glu Gly
385             390             395             400

Phe Ser Asp Gln Phe Glu Gln Glu Ile Thr Gly Cys Gly Ala Ser Pro
            405             410             415

Gly Ala Leu Arg Ser Tyr Gln Leu Trp Ala Asp Asn Leu Lys Lys Gly
        420             425             430

Gly Gly Ala Leu Leu His Ser Val Lys Ala Lys Thr Gln Pro Ala Val
        435             440             445

Lys Asn Met Tyr Arg Ser Ala Lys Ser Gly Leu Lys Gly Val Gln Ser
    450             455             460

Leu Leu Met Tyr Lys Asp Gly Asp Ser Val Leu Gln Arg Gly Gly Ser
465             470             475             480

Leu Arg Ala Pro Ala Leu Pro Ser Arg Ser Asp Arg Leu Gln Gln Arg
            485             490             495

Leu Pro Ile Thr Gln His Phe Gly Lys Asn Arg Pro Leu Arg Pro Ser
            500             505             510

Arg Arg Arg Gln Leu Glu Glu Gly Thr Ser Glu Pro Pro Gly Ala Gly
        515             520             525

Thr Pro Pro Leu Ser Pro Glu Asp Glu Gly Cys Pro Trp Ala Glu Glu
    530             535             540

Ala Leu Asp Ser Ser Phe Leu Gly Ser Gly Glu Glu Leu Asp Leu Leu
545             550             555             560

Ser Glu Ile Leu Asp Ser Leu Ser Met Gly Ala Lys Ser Ala Gly Ser
            565             570             575

Leu Arg Pro Ser Gln Ser Leu Asp Cys Cys His Arg Gly Asp Leu Asp
        580             585             590
```

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```
    Ser Cys Phe Ser Leu Pro Asn Ile Leu Arg Trp Gln Pro Asp Asp Lys
            595             600             605

    Lys Leu Pro Glu Pro Glu Pro Gln Pro Leu Ser Leu Pro Ser Leu Gln
            610             615             620

    Asn Ala Ser Ser Leu Asp Ala Thr Ser Ser Ser Lys Asp Ser Arg Ser
    625             630             635             640

    Gln Leu Ile Pro Ser Glu Ser Asp Gln Glu Val Thr Ser Pro Ser Gln
                    645             650             655

    Ser Ser Thr Ala Ser Ala Asp Pro Ser Ile Trp Gly Asp Pro Lys Pro
                660             665             670

    Ser Pro Leu Thr Glu Pro Leu Ile Leu His Leu Thr Pro Ser His Lys
            675             680             685

    Ala Ala Glu Asp Phe Thr Ala Gln Glu Asn Pro Thr Pro Trp Leu Ser
            690             695             700

    Thr Ala Pro Thr Glu Pro Ser Pro Pro Glu Ser Pro Gln Ile Leu Ala
    705             710             715             720

    Pro Thr Lys Pro Asn Phe Asp Ile Ala Trp Thr Ser Gln Pro Leu Asp
                    725             730             735

    Pro Ser Ser Asp Pro Ser Ser Leu Glu Asp Pro Arg Ala Arg Pro Pro
                    740             745             750

    Lys Ala Leu Leu Ala Glu Arg Ala His Leu Gln Pro Arg Glu Glu Pro
            755             760             765

    Gly Ala Leu Asn Ser Pro Ala Thr Pro Thr Ser Asn Cys Gln Lys Ser
    770             775             780

    Gln Pro Ser Lys Pro Ala Gln Ser Arg
    785             790


    <210>  2615
    <211>  83
    <212>  PRT
    <213>  Homo sapiens

    <400>  2615

    Met Ser Phe Phe Gln Leu Leu Met Lys Arg Lys Glu Leu Ile Pro Leu
```

```
1                    5                    10                    15
```

```
Val Val Phe Met Thr Val Ala Ala Gly Gly Ala Ser Ser Phe Ala Val
            20                25                30
```

```
Tyr Ser Leu Trp Lys Thr Asp Val Ile Leu Asp Arg Lys Lys Asn Pro
        35                40                45
```

```
Glu Pro Trp Glu Thr Val Asp Pro Thr Val Pro Gln Lys Leu Ile Thr
    50                55                60
```

```
Ile Asn Gln Gln Trp Lys Pro Ile Glu Glu Leu Gln Asn Val Gln Arg
65                70                75                80
```

```
Val Thr Lys
```

```
<210>  2616
<211>  2413
<212>  PRT
<213>  Homo sapiens

<400>  2616
```

```
Met Gly Ile Ser Thr Val Ile Leu Glu Met Cys Leu Leu Trp Gly Gln
1                5                10                15
```

```
Val Leu Ser Thr Gly Gly Trp Ile Pro Arg Thr Thr Asp Tyr Ala Ser
            20                25                30
```

```
Leu Ile Pro Ser Glu Val Pro Leu Asp Gln Thr Val Ala Glu Gly Ser
        35                40                45
```

```
Pro Phe Pro Ser Glu Ser Thr Leu Glu Ser Thr Ala Ala Glu Gly Ser
    50                55                60
```

```
Pro Ile Ser Leu Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
65                70                75                80
```

```
Leu Ile Pro Ser Glu Ser Thr Leu Glu Ser Thr Val Ala Glu Gly Ser
            85                90                95
```

```
Asp Ser Gly Leu Ala Leu Arg Leu Val Asn Gly Asp Gly Arg Cys Gln
            100               105               110
```

```
Gly Arg Val Glu Ile Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp
        115               120               125
```

```
Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly
    130             135             140

Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Trp Phe Gly Gln Gly
145             150             155             160

Ser Gly Pro Ile Ala Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser
            165             170             175

Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
            180             185             190

His Gly Glu Asp Ala Gly Val Ile Cys Ser Ala Ala Gln Pro Gln Ser
    195             200             205

Thr Leu Arg Pro Glu Ser Trp Pro Val Arg Ile Ser Pro Pro Val Pro
    210             215             220

Thr Glu Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
225             230             235             240

Asp Arg Cys Arg Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly
            245             250             255

Thr Val Cys Asp Asp Tyr Trp Asp Thr Asn Asp Ala Asn Val Val Cys
            260             265             270

Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Gln
    275             280             285

Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
    290             295             300

Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu Thr
305             310             315             320

His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Pro
            325             330             335

Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr Ser His Ala
    340             345             350

Ser Thr Ala Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly
    355             360             365
```

Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp
    370   375   380

Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala Asn Val Val
385   390   395   400

Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro Gly Asn Ala
            405   410   415

Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
            420   425   430

Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp Leu
            435   440   445

Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala
    450   455   460

Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro Thr Ile Thr
465   470   475   480

Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
            485   490   495

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
            500   505   510

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala
            515   520   525

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Leu Ala Pro
    530   535   540

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
545   550   555   560

Val Arg Cys Ser Gly Asn Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
            565   570   575

Gly Trp Leu Ser His Asn Cys Gly His Ser Glu Asp Ala Gly Val Ile
            580   585   590

Cys Ser Gly Pro Glu Ser Ser Leu Ala Leu Arg Leu Val Asn Gly Gly
            595   600   605

Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly Ser Trp Gly

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<pre>
                610   615   620

     Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn Val Val Cys
     625   630   635   640

     Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Arg
                     645   650   655

     Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser
                     660   665   670

     Gly His Glu Ser Tyr Leu Trp Ser Cys Pro Asn Asn Gly Trp Leu Ser
                     675   680   685

     His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys Ser Ala Ala
         690   695   700

     Gln Ser Arg Ser Thr Pro Arg Pro Asp Thr Leu Ser Thr Ile Thr Leu
     705   710   715   720

     Pro Pro Ser Thr Val Gly Ser Glu Ser Ser Leu Thr Leu Arg Leu Val
                     725   730   735

     Asn Gly Ser Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg Gly
                     740   745   750

     Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Asn Asp Ala Asn
                     755   760   765

     Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Met Ser Ala Pro Gly
         770   775   780

     Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val
     785   790   795   800

     Arg Cys Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly
                     805   810   815

     Trp Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys
                     820   825   830

     Ser Val Ser Gln Ser Arg Pro Thr Pro Ser Pro Asp Thr Trp Pro Thr
         835   840   845

     Ser His Ala Ser Thr Ala Gly Ser Glu Ser Ser Leu Ala Leu Arg Leu
         850   855   860
</pre>

Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val Leu Tyr Arg
865   870   875   880

Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp Thr Ser Asp Ala
                885   890   895

Asn Val Val Cys Arg Gln Leu Gly Cys Gly Trp Ala Thr Ser Ala Pro
            900   905   910

Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp
        915   920   925

Val Arg Cys Ser Gly Tyr Glu Ser Tyr Leu Trp Ser Cys Pro His Asn
    930   935   940

Gly Trp Leu Ser His Asn Cys Gln His Ser Glu Asp Ala Gly Val Ile
945   950   955   960

Cys Ser Ala Ala His Ser Trp Ser Thr Pro Ser Pro Asp Thr Leu Pro
            965   970   975

Thr Ile Thr Leu Pro Ala Ser Thr Val Gly Ser Glu Ser Ser Leu Ala
        980   985   990

Leu Arg Leu Val Asn Gly Gly Asp Arg Cys Gln Gly Arg Val Glu Val
    995   1000   1005

Leu Tyr Gln Gly Ser Trp Gly Thr Val Cys Asp Asp Ser Trp Asp
1010   1015   1020

Thr Asn Asp Ala Asn Val Val Cys Arg Gln Pro Gly Cys Gly Trp
1025   1030   1035

Ala Met Ser Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly Ser Gly
1040   1045   1050

Pro Ile Val Leu Asp Asp Val Arg Cys Ser Gly His Glu Ser Tyr
1055   1060   1065

Pro Trp Ser Cys Pro His Asn Gly Trp Leu Ser His Asn Cys Gly
1070   1075   1080

His Ser Glu Asp Ala Gly Val Ile Cys Ser Ala Ser Gln Ser Arg
1085   1090   1095

```
Pro Thr  Pro Ser Pro Asp Thr  Trp Pro Thr Ser His  Ala Ser Thr
    1100                 1105             1110

Ala Gly  Ser Glu Ser Ser Leu  Ala Leu Arg Leu Val  Asn Gly Gly
    1115                 1120             1125

Asp Arg  Cys Gln Gly Arg Val  Glu Val Leu Tyr Arg  Gly Ser Trp
    1130                 1135             1140

Gly Thr  Val Cys Asp Asp Tyr  Trp Asp Thr Asn Asp  Ala Asn Val
    1145                 1150             1155

Val Cys  Arg Gln Leu Gly Cys  Gly Trp Ala Met Ser  Ala Pro Gly
    1160                 1165             1170

Asn Ala  Arg Phe Gly Gln Gly  Ser Gly Pro Ile Val  Leu Asp Asp
    1175                 1180             1185

Val Arg  Cys Ser Gly His Glu  Ser Tyr Leu Trp Ser  Cys Pro His
    1190                 1195             1200

Asn Gly  Trp Leu Ser His Asn  Cys Gly His His Glu  Asp Ala Gly
    1205                 1210             1215

Val Ile  Cys Ser Ala Ser Gln  Ser Gln Pro Thr Pro  Ser Pro Asp
    1220                 1225             1230

Thr Trp  Pro Thr Ser His Ala  Ser Thr Ala Gly Ser  Glu Ser Ser
    1235                 1240             1245

Leu Ala  Leu Arg Leu Val Asn  Gly Gly Asp Arg Cys  Gln Gly Arg
    1250                 1255             1260

Val Glu  Val Leu Tyr Arg Gly  Ser Trp Gly Thr Val  Cys Asp Asp
    1265                 1270             1275

Tyr Trp  Asp Thr Asn Asp Ala  Asn Val Val Cys Arg  Gln Leu Gly
    1280                 1285             1290

Cys Gly  Trp Ala Thr Ser Ala  Pro Gly Asn Ala Arg  Phe Gly Gln
    1295                 1300             1305

Gly Ser  Gly Pro Ile Val Leu  Asp Asp Val Arg Cys  Ser Gly His
    1310                 1315             1320
```

```
Glu Ser  Tyr Leu Trp Ser Cys  Pro His Asn Gly Trp  Leu Ser His
    1325             1330              1335


Asn Cys  Gly His His Glu Asp  Ala Gly Val Ile Cys  Ser Ala Ser
    1340             1345              1350


Gln Ser  Gln Pro Thr Pro Ser  Pro Asp Thr Trp Pro  Thr Ser His
    1355             1360              1365


Ala Ser  Thr Ala Gly Ser Glu  Ser Ser Leu Ala Leu  Arg Leu Val
    1370             1375              1380


Asn Gly  Gly Asp Arg Cys Gln  Gly Arg Val Glu Val  Leu Tyr Arg
    1385             1390              1395


Gly Ser  Trp Gly Thr Val Cys  Asp Asp Tyr Trp Asp  Thr Asn Asp
    1400             1405              1410


Ala Asn  Val Val Cys Arg Gln  Leu Gly Cys Gly Trp  Ala Thr Ser
    1415             1420              1425


Ala Pro  Gly Asn Ala Arg Phe  Gly Gln Gly Ser Gly  Pro Ile Val
    1430             1435              1440


Leu Asp  Asp Val Arg Cys Ser  Gly His Glu Ser Tyr  Leu Trp Ser
    1445             1450              1455


Cys Pro  His Asn Gly Trp Leu  Ser His Asn Cys Gly  His His Glu
    1460             1465              1470


Asp Ala  Gly Val Ile Cys Ser  Ala Ser Gln Ser Gln  Pro Thr Pro
    1475             1480              1485


Ser Pro  Asp Thr Trp Pro Thr  Ser Arg Ala Ser Thr  Ala Gly Ser
    1490             1495              1500


Glu Ser  Thr Leu Ala Leu Arg  Leu Val Asn Gly Gly  Asp Arg Cys
    1505             1510              1515


Arg Gly  Arg Val Glu Val Leu  Tyr Gln Gly Ser Trp  Gly Thr Val
    1520             1525              1530


Cys Asp  Asp Tyr Trp Asp Thr  Asn Asp Ala Asn Val  Val Cys Arg
    1535             1540              1545


Gln Leu  Gly Cys Gly Trp Ala  Met Ser Ala Pro Gly  Asn Ala Gln
```

```
       1550                    1555                    1560


Phe Gly Gln Gly Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys
    1565              1570              1575


Ser Gly His Glu Ser Tyr Leu Trp Ser Cys Pro His Asn Gly Trp
    1580              1585              1590


Leu Ser His Asn Cys Gly His His Glu Asp Ala Gly Val Ile Cys
    1595              1600              1605


Ser Ala Ala Gln Ser Gln Ser Thr Pro Arg Pro Asp Thr Trp Leu
    1610              1615              1620


Thr Thr Asn Leu Pro Ala Leu Thr Val Gly Ser Glu Ser Ser Leu
    1625              1630              1635


Ala Leu Arg Leu Val Asn Gly Gly Asp Arg Cys Arg Gly Arg Val
    1640              1645              1650


Glu Val Leu Tyr Arg Gly Ser Trp Gly Thr Val Cys Asp Asp Ser
    1655              1660              1665


Trp Asp Thr Asn Asp Ala Asn Val Val Cys Arg Gln Leu Gly Cys
    1670              1675              1680


Gly Trp Ala Met Ser Ala Pro Gly Asn Ala Arg Phe Gly Gln Gly
    1685              1690              1695


Ser Gly Pro Ile Val Leu Asp Asp Val Arg Cys Ser Gly Asn Glu
    1700              1705              1710


Ser Tyr Leu Trp Ser Cys Pro His Lys Gly Trp Leu Thr His Asn
    1715              1720              1725


Cys Gly His His Glu Asp Ala Gly Val Ile Cys Ser Ala Thr Gln
    1730              1735              1740


Ile Asn Ser Thr Thr Thr Asp Trp Trp His Pro Thr Thr Thr Thr
    1745              1750              1755


Thr Ala Arg Pro Ser Ser Asn Cys Gly Gly Phe Leu Phe Tyr Ala
    1760              1765              1770


Ser Gly Thr Phe Ser Ser Pro Ser Tyr Pro Ala Tyr Tyr Pro Asn
    1775              1780              1785
```

```
Asn Ala  Lys Cys Val Trp Glu  Ile Glu Val Asn Ser  Gly Tyr Arg
    1790                 1795              1800

Ile Asn  Leu Gly Phe Ser Asn  Leu Lys Leu Glu Ala  His His Asn
    1805                 1810              1815

Cys Ser  Phe Asp Tyr Val Glu  Ile Phe Asp Gly Ser  Leu Asn Ser
    1820                 1825              1830

Ser Leu  Leu Leu Gly Lys Ile  Cys Asn Asp Thr Arg  Gln Ile Phe
    1835                 1840              1845

Thr Ser  Ser Tyr Asn Arg Met  Thr Ile His Phe Arg  Ser Asp Ile
    1850                 1855              1860

Ser Phe  Gln Asn Thr Gly Phe  Leu Ala Trp Tyr Asn  Ser Phe Pro
    1865                 1870              1875

Ser Asp  Ala Thr Leu Arg Leu  Val Asn Leu Asn Ser  Ser Tyr Gly
    1880                 1885              1890

Leu Cys  Ala Gly Arg Val Glu  Ile Tyr His Gly Gly  Thr Trp Gly
    1895                 1900              1905

Thr Val  Cys Asp Asp Ser Trp  Thr Ile Gln Glu Ala  Glu Val Val
    1910                 1915              1920

Cys Arg  Gln Leu Gly Cys Gly  Arg Ala Val Ser Ala  Leu Gly Asn
    1925                 1930              1935

Ala Tyr  Phe Gly Ser Gly Ser  Gly Pro Ile Thr Leu  Asp Asp Val
    1940                 1945              1950

Glu Cys  Ser Gly Thr Glu Ser  Thr Leu Trp Gln Cys  Arg Asn Arg
    1955                 1960              1965

Gly Trp  Phe Ser His Asn Cys  Asn His Arg Glu Asp  Ala Gly Val
    1970                 1975              1980

Ile Cys  Ser Gly Asn His Leu  Ser Thr Pro Ala Pro  Phe Leu Asn
    1985                 1990              1995

Ile Thr  Arg Pro Asn Thr Asp  Tyr Ser Cys Gly Gly  Phe Leu Ser
    2000                 2005              2010
```

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Gln Pro Ser Gly Asp Phe Ser Ser Pro Phe Tyr Pro Gly Asn Tyr
    2015   2020   2025

Pro Asn Asn Ala Lys Cys Val Trp Asp Ile Glu Val Gln Asn Asn
    2030   2035   2040

Tyr Arg Val Thr Val Ile Phe Arg Asp Val Gln Leu Glu Gly Gly
    2045   2050   2055

Cys Asn Tyr Asp Tyr Ile Glu Val Phe Asp Gly Pro Tyr Arg Ser
    2060   2065   2070

Ser Pro Leu Ile Ala Arg Val Cys Asp Gly Ala Arg Gly Ser Phe
    2075   2080   2085

Thr Ser Ser Ser Asn Phe Met Ser Ile Arg Phe Ile Ser Asp His
    2090   2095   2100

Ser Ile Thr Arg Arg Gly Phe Arg Ala Glu Tyr Tyr Ser Ser Pro
    2105   2110   2115

Ser Asn Asp Ser Thr Asn Leu Leu Cys Leu Pro Asn His Met Gln
    2120   2125   2130

Ala Ser Val Ser Arg Ser Tyr Leu Gln Ser Leu Gly Phe Ser Ala
    2135   2140   2145

Ser Asp Leu Val Ile Ser Thr Trp Asn Gly Tyr Tyr Glu Cys Arg
    2150   2155   2160

Pro Gln Ile Thr Pro Asn Leu Val Ile Phe Thr Ile Pro Tyr Ser
    2165   2170   2175

Gly Cys Gly Thr Phe Lys Gln Ala Asp Asn Asp Thr Ile Asp Tyr
    2180   2185   2190

Ser Asn Phe Leu Thr Ala Ala Val Ser Gly Gly Ile Ile Lys Arg
    2195   2200   2205

Arg Thr Asp Leu Arg Ile His Val Ser Cys Arg Met Leu Gln Asn
    2210   2215   2220

Thr Trp Val Asp Thr Met Tyr Ile Ala Asn Asp Thr Ile His Val
    2225   2230   2235

```
Ala Asn   Asn Thr Ile Gln Val   Glu Glu Val Gln Tyr   Gly Asn Phe
    2240                2245                2250
```

```
Asp Val   Asn Ile Ser Phe Tyr   Thr Ser Ser Ser Phe   Leu Tyr Pro
    2255                2260                2265
```

```
Val Thr   Ser Arg Pro Tyr Tyr   Val Asp Leu Asn Gln   Asp Leu Tyr
    2270                2275                2280
```

```
Val Gln   Ala Glu Ile Leu His   Ser Asp Ala Val Leu   Thr Leu Phe
    2285                2290                2295
```

```
Val Asp   Thr Cys Val Ala Ser   Pro Tyr Ser Asn Asp   Phe Thr Ser
    2300                2305                2310
```

```
Leu Thr   Tyr Asp Leu Ile Arg   Ser Gly Cys Val Arg   Asp Asp Thr
    2315                2320                2325
```

```
Tyr Gly   Pro Tyr Ser Ser Pro   Ser Leu Arg Ile Ala   Arg Phe Arg
    2330                2335                2340
```

```
Phe Arg   Ala Phe His Phe Leu   Asn Arg Phe Pro Ser   Val Tyr Leu
    2345                2350                2355
```

```
Arg Cys   Lys Met Val Val Cys   Arg Ala Tyr Asp Pro   Ser Ser Arg
    2360                2365                2370
```

```
Cys Tyr   Arg Gly Cys Val Leu   Arg Ser Lys Arg Asp   Val Gly Ser
    2375                2380                2385
```

```
Tyr Gln   Glu Lys Val Asp Val   Val Leu Gly Pro Ile   Gln Leu Gln
    2390                2395                2400
```

```
Thr Pro   Pro Arg Arg Glu Glu   Glu Pro Arg
    2405                2410
```

```
<210>   2617
<211>   143
<212>   PRT
<213>   Homo sapiens
```

```
<400>   2617
```

```
Met Gly Lys Cys Arg Gly Leu Arg Thr Ala Arg Lys Leu Arg Ser His
1               5                   10                  15
```

```
Arg Arg Asp Gln Lys Trp His Asp Lys Gln Tyr Lys Lys Ala His Leu
            20                  25                  30
```

```
Gly Thr Ala Leu Lys Ala Asn Pro Phe Gly Gly Ala Ser His Ala Lys
        35              40              45

Gly Ile Val Leu Glu Lys Val Gly Val Glu Ala Lys Gln Pro Asn Ser
        50              55              60

Ala Ile Arg Lys Cys Val Arg Val Gln Leu Ile Lys Asn Gly Lys Lys
65              70              75              80

Ile Thr Ala Phe Val Pro Asn Asp Gly Cys Leu Asn Phe Ile Glu Glu
                85              90              95

Asn Asp Glu Val Leu Val Ala Gly Phe Gly Arg Lys Gly His Ala Val
            100             105             110

Gly Asp Ile Pro Gly Val Arg Phe Lys Val Val Lys Val Ala Asn Val
        115             120             125

Ser Leu Leu Ala Leu Tyr Lys Gly Lys Lys Glu Arg Pro Arg Ser
        130             135             140


<210>  2618
<211>  272
<212>  PRT
<213>  Homo sapiens

<400>  2618

Met Glu Glu Glu Ala Ile Ala Ser Leu Pro Gly Glu Glu Thr Glu Asp
1               5               10              15

Met Asp Phe Leu Ser Gly Leu Glu Leu Ala Asp Leu Leu Asp Pro Arg
            20              25              30

Gln Pro Asp Trp His Leu Asp Pro Gly Leu Ser Ser Pro Gly Pro Leu
        35              40              45

Ser Ser Ser Gly Gly Gly Ser Asp Ser Gly Gly Leu Trp Arg Gly Asp
        50              55              60

Asp Asp Asp Glu Ala Ala Ala Ala Glu Met Gln Arg Phe Ser Asp Leu
65              70              75              80

Leu Gln Arg Leu Leu Asn Gly Ile Gly Gly Cys Ser Ser Ser Ser Asp
            85              90              95
```

```
    Ser Gly Ser Ala Glu Lys Arg Arg Arg Lys Ser Pro Gly Gly Gly Gly
                100             105             110


    Gly Gly Gly Ser Gly Asn Asp Asn Asn Gln Ala Ala Thr Lys Ser Pro
                115             120             125


    Arg Lys Ala Ala Ala Ala Ala Ala Arg Leu Asn Arg Leu Lys Lys Lys
        130             135             140


    Glu Tyr Val Met Gly Leu Glu Ser Arg Val Arg Gly Leu Ala Ala Glu
    145             150             155             160


    Asn Gln Glu Leu Arg Ala Glu Asn Arg Glu Leu Gly Lys Arg Val Gln
                    165             170             175


    Ala Leu Gln Glu Glu Ser Arg Tyr Leu Arg Ala Val Leu Ala Asn Glu
                180             185             190


    Thr Gly Leu Ala Arg Leu Leu Ser Arg Leu Ser Gly Val Gly Leu Arg
                195             200             205


    Leu Thr Thr Ser Leu Phe Arg Asp Ser Pro Ala Gly Asp His Asp Tyr
        210             215             220


    Ala Leu Pro Val Gly Lys Gln Lys Gln Asp Leu Leu Glu Glu Asp Asp
    225             230             235             240


    Ser Ala Gly Gly Val Cys Leu His Val Asp Lys Asp Lys Val Ser Val
                245             250             255


    Glu Phe Cys Ser Ala Cys Ala Arg Lys Ala Ser Ser Ser Leu Lys Met
                260             265             270


    <210>  2619
    <211>  694
    <212>  PRT
    <213>  Homo sapiens

    <400>  2619


    Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His
    1               5               10              15


    Leu Thr Leu Leu Leu Ser Leu Ala Gly Leu Arg Val Asp Leu Asp Leu
                20              25              30


    Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe
                35              40              45
```

```
Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala
     50              55              60

Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu
65              70              75              80

Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg
                 85              90              95

Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu
                100             105             110

Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu
         115             120             125

Gly Ala Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp
     130             135             140

Gly Gly Ser Gln Ala Val Gln Gly Gly Gly Asp Pro Arg Ala Ala
145             150             155             160

Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu
                165             170             175

Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn
             180             185             190

Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His
         195             200             205

Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln
     210             215             220

Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu
225             230             235             240

Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr
             245             250             255

Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln
             260             265             270

Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro
         275             280             285
```

1077

Gly Ser Ile Ser Asp Gly Met Asn Ser Ser Ala His Tyr His Val Asn
    290   295   300

Phe Ser Gln Ala Ile Ser Gln Asp Val Asn Leu His Glu Ala Ile Leu
305   310   315   320

Leu Cys Pro Asn Asn Thr Phe Arg Arg Asp Pro Thr Ala Arg Thr Ser
            325   330   335

Gln Ser Gln Glu Pro Phe Leu Gln Leu Asn Ser His Thr Thr Asn Pro
            340   345   350

Glu Gln Thr Leu Pro Gly Thr Asn Leu Thr Gly Phe Leu Ser Pro Val
        355   360   365

Asp Asn His Met Arg Asn Leu Thr Ser Gln Asp Leu Leu Tyr Asp Leu
    370   375   380

Asp Ile Asn Ile Phe Asp Glu Ile Asn Leu Met Ser Leu Ala Thr Glu
385   390   395   400

Asp Asn Phe Asp Pro Ile Asp Val Ser Gln Leu Phe Asp Glu Pro Asp
            405   410   415

Ser Asp Ser Gly Leu Ser Leu Asp Ser Ser His Asn Asn Thr Ser Val
            420   425   430

Ile Lys Ser Asn Ser Ser His Ser Val Cys Asp Glu Gly Ala Ile Gly
        435   440   445

Tyr Cys Thr Asp His Glu Ser Ser Ser His His Asp Leu Glu Gly Ala
    450   455   460

Val Gly Gly Tyr Tyr Pro Glu Pro Ser Lys Leu Cys His Leu Asp Gln
465   470   475   480

Ser Asp Ser Asp Phe His Gly Asp Leu Thr Phe Gln His Val Phe His
            485   490   495

Asn His Thr Tyr His Leu Gln Pro Thr Ala Pro Glu Ser Thr Ser Glu
            500   505   510

Pro Phe Pro Trp Pro Gly Lys Ser Gln Lys Ile Arg Ser Arg Tyr Leu
            515   520   525

```
Glu Asp Thr Asp Arg Asn Leu Ser Arg Asp Glu Gln Arg Ala Lys Ala
    530              535              540

Leu His Ile Pro Phe Ser Val Asp Glu Ile Val Gly Met Pro Val Asp
545              550              555              560

Ser Phe Asn Ser Met Leu Ser Arg Tyr Tyr Leu Thr Asp Leu Gln Val
                565              570              575

Ser Leu Ile Arg Asp Ile Arg Arg Arg Gly Lys Asn Lys Val Ala Ala
             580              585              590

Gln Asn Cys Arg Lys Arg Lys Leu Asp Ile Ile Leu Asn Leu Glu Asp
        595              600              605

Asp Val Cys Asn Leu Gln Ala Lys Lys Glu Thr Leu Lys Arg Glu Gln
    610              615              620

Ala Gln Cys Asn Lys Ala Ile Asn Ile Met Lys Gln Lys Leu His Asp
625              630              635              640

Leu Tyr His Asp Ile Phe Ser Arg Leu Arg Asp Asp Gln Gly Arg Pro
             645              650              655

Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile
        660              665              670

Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr
    675              680              685

Gln Lys Gly Lys Arg Lys
    690


<210>  2620
<211>  391
<212>  PRT
<213>  Homo sapiens

<400>  2620

Met Lys Cys Leu Val Thr Gly Gly Asn Val Lys Val Leu Gly Lys Ala
1              5              10              15

Val His Ser Leu Ser Arg Ile Gly Asp Glu Leu Tyr Leu Glu Pro Leu
        20              25              30

Glu Asp Gly Leu Ser Leu Arg Thr Val Asn Ser Ser Arg Ser Ala Tyr
        35              40              45
```

Ala Cys Phe Leu Phe Ala Pro Leu Phe Phe Gln Gln Tyr Gln Ala Ala
    50   55   60

Thr Pro Gly Gln Asp Leu Leu Arg Cys Lys Ile Leu Met Lys Ser Phe
65   70   75   80

Leu Ser Val Phe Arg Ser Leu Ala Met Leu Glu Lys Thr Val Glu Lys
            85   90   95

Cys Cys Ile Ser Leu Asn Gly Arg Ser Ser Arg Leu Val Val Gln Leu
        100   105   110

His Cys Lys Phe Gly Val Arg Lys Thr His Asn Leu Ser Phe Gln Asp
        115   120   125

Cys Glu Ser Leu Gln Ala Val Phe Asp Pro Ala Ser Cys Pro His Met
    130   135   140

Leu Arg Ala Pro Ala Arg Val Leu Gly Glu Ala Val Leu Pro Phe Ser
145   150   155   160

Pro Ala Leu Ala Glu Val Thr Leu Gly Ile Gly Arg Gly Arg Arg Val
            165   170   175

Ile Leu Arg Ser Tyr His Glu Glu Glu Ala Asp Ser Thr Ala Lys Ala
            180   185   190

Met Val Thr Glu Met Cys Leu Gly Glu Glu Asp Phe Gln Gln Leu Gln
            195   200   205

Ala Gln Glu Gly Val Ala Ile Thr Phe Cys Leu Lys Glu Phe Arg Gly
    210   215   220

Leu Leu Ser Phe Ala Glu Ser Ala Asn Leu Asn Leu Ser Ile His Phe
225   230   235   240

Asp Ala Pro Gly Arg Pro Ala Ile Phe Thr Ile Lys Asp Ser Leu Leu
            245   250   255

Asp Gly His Phe Val Leu Ala Thr Leu Ser Asp Thr Asp Ser His Ser
            260   265   270

Gln Asp Leu Gly Ser Pro Glu Arg His Gln Pro Val Pro Gln Leu Gln
    275   280   285

```
Ala His Ser Thr Pro His Pro Asp Asp Phe Ala Asn Asp Asp Ile Asp
    290                 295                 300

Ser Tyr Met Ile Ala Met Glu Thr Thr Ile Gly Asn Glu Gly Ser Arg
305                 310                 315                 320

Val Leu Pro Ser Ile Ser Leu Ser Pro Gly Pro Gln Pro Pro Lys Ser
                325                 330                 335

Pro Gly Pro His Ser Glu Glu Glu Asp Glu Ala Glu Pro Ser Thr Val
            340                 345                 350

Pro Gly Thr Pro Pro Pro Lys Lys Phe Arg Ser Leu Phe Phe Gly Ser
            355                 360                 365

Ile Leu Ala Pro Val Arg Ser Pro Gln Gly Pro Ser Pro Val Leu Ala
    370                 375                 380

Glu Asp Ser Glu Gly Glu Gly
385                 390
```

```
<210>   2621
<211>   1429
<212>   PRT
<213>   Homo sapiens

<400>   2621
```

```
Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu
1               5                   10                  15

Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Leu Ala Asn Lys Ala
            20                  25                  30

His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr
        35                  40                  45

Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln
    50                  55                  60

Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg
65                  70                  75                  80

Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe
                85                  90                  95

Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr
```

100 105 110

Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys
115 120 125

Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser
130 135 140

Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu
145 150 155 160

Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala
165 170 175

Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro
180 185 190

Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu
195 200 205

Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg
210 215 220

Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr
225 230 235 240

Pro Pro Gln Ala His Thr Ser Leu Gln Pro His His His Pro Trp Glu
245 250 255

Pro Ser Val Arg Glu Ser Leu Cys Ser Thr Trp Pro Trp Lys Asn Glu
260 265 270

Asp Phe Asn Gln Lys Phe Thr Gln Leu Leu Leu Leu Gln Arg Pro His
275 280 285

Pro Arg Ser Gln Asp Pro Leu Val Lys Arg Ser Trp Pro Asp Tyr Val
290 295 300

Glu Glu Asn Arg Gly His Leu Ile Glu Ile Arg Asp Leu Phe Gly Pro
305 310 315 320

Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala
325 330 335

Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly
340 345 350

```
Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser
        355             360             365

Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile
    370             375             380

Gly Lys Asp Gly Thr Ala Thr Pro Ala Pro Ile Arg Gln Ile Leu Ser
385             390             395             400

Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly
            405             410             415

Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln
        420             425             430

Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile
        435             440             445

Leu Pro Glu Ala Ser Phe Leu Ile Thr Ala Arg Thr Thr Ala Leu Gln
    450             455             460

Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly
465             470             475             480

Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp
            485             490             495

Glu Arg Gln Ala Ile Arg Ala Phe Arg Leu Val Lys Ser Asn Lys Glu
        500             505             510

Leu Trp Ala Leu Cys Leu Val Pro Trp Val Ser Trp Leu Ala Cys Thr
        515             520             525

Cys Leu Met Gln Gln Met Lys Arg Lys Glu Lys Leu Thr Leu Thr Ser
    530             535             540

Lys Thr Thr Thr Leu Cys Leu His Tyr Leu Ala Gln Ala Leu Gln
545             550             555             560

Ala Gln Pro Leu Gly Pro Gln Leu Arg Asp Leu Cys Ser Leu Ala Ala
            565             570             575

Glu Gly Ile Trp Gln Lys Lys Thr Leu Phe Ser Pro Asp Asp Leu Arg
        580             585             590
```

```
Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly
        595             600             605

Ile Leu Gln Glu His Pro Ile Pro Leu Ser Tyr Ser Phe Ile His Leu
    610             615             620

Cys Phe Gln Glu Phe Phe Ala Ala Met Ser Tyr Val Leu Glu Asp Glu
625             630                 635                 640

Lys Gly Arg Gly Lys His Ser Asn Cys Ile Ile Asp Leu Glu Lys Thr
            645             650                 655

Leu Glu Ala Tyr Gly Ile His Gly Leu Phe Gly Ala Ser Thr Thr Arg
            660             665             670

Phe Leu Leu Gly Leu Leu Ser Asp Glu Gly Glu Arg Glu Met Glu Asn
    675             680             685

Ile Phe His Cys Arg Leu Ser Gln Gly Arg Asn Leu Met Gln Trp Val
    690             695             700

Pro Ser Leu Gln Leu Leu Leu Gln Pro His Ser Leu Glu Ser Leu His
705             710             715             720

Cys Leu Tyr Glu Thr Arg Asn Lys Thr Phe Leu Thr Gln Val Met Ala
            725             730                 735

His Phe Glu Glu Met Gly Met Cys Val Glu Thr Asp Met Glu Leu Leu
            740             745             750

Val Cys Thr Phe Cys Ile Lys Phe Ser Arg His Val Lys Lys Leu Gln
            755             760             765

Leu Ile Glu Gly Arg Gln His Arg Ser Thr Trp Ser Pro Thr Met Val
    770             775             780

Val Leu Phe Arg Trp Val Pro Val Thr Asp Ala Tyr Trp Gln Ile Leu
785             790                 795                 800

Phe Ser Val Leu Lys Val Thr Arg Asn Leu Lys Glu Leu Asp Leu Ser
            805             810                 815

Gly Asn Ser Leu Ser His Ser Ala Val Lys Ser Leu Cys Lys Thr Leu
            820             825             830
```

```
Arg Arg Pro Arg Cys Leu Leu Glu Thr Leu Arg Leu Ala Gly Cys Gly
        835             840             845


Leu Thr Ala Glu Asp Cys Lys Asp Leu Ala Phe Gly Leu Arg Ala Asn
        850             855             860


Gln Thr Leu Thr Glu Leu Asp Leu Ser Phe Asn Val Leu Thr Asp Ala
865             870             875             880


Gly Ala Lys His Leu Cys Gln Arg Leu Arg Gln Pro Ser Cys Lys Leu
            885             890             895


Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln
            900             905             910


Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp
        915             920             925


Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Leu Cys Glu
        930             935             940


Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Leu Asp Gln
945             950             955             960


Thr Thr Leu Ser Asp Glu Met Arg Gln Glu Leu Arg Ala Leu Glu Gln
            965             970             975


Glu Lys Pro Gln Leu Leu Ile Phe Ser Arg Arg Lys Pro Ser Val Met
            980             985             990


Thr Pro Thr Glu Gly Leu Asp Thr  Gly Glu Met Ser Asn  Ser Thr Ser
            995             1000             1005


Ser Leu  Lys Arg Gln Arg Leu  Gly Ser Glu Arg Ala  Ala Ser His
    1010             1015             1020


Val Ala  Gln Ala Asn Leu Lys  Leu Leu Asp Val Ser  Lys Ile Phe
    1025             1030             1035


Pro Ile  Ala Glu Ile Ala Glu  Glu Ser Ser Pro Glu  Val Val Pro
    1040             1045             1050


Val Glu  Leu Leu Cys Val Pro  Ser Pro Ala Ser Gln  Gly Asp Leu
    1055             1060             1065


His Thr  Lys Pro Leu Gly Thr  Asp Asp Asp Phe Trp  Gly Pro Thr
```

1085

1070   1075   1080

Gly Pro Val Ala Thr Glu Val Val Asp Lys Glu Lys Asn Leu Tyr
     1085   1090   1095

Arg Val His Phe Pro Val Ala Gly Ser Tyr Arg Trp Pro Asn Thr
     1100   1105   1110

Gly Leu Cys Phe Val Met Arg Glu Ala Val Thr Val Glu Ile Glu
     1115   1120   1125

Phe Cys Val Trp Asp Gln Phe Leu Gly Glu Ile Asn Pro Gln His
     1130   1135   1140

Ser Trp Met Val Ala Gly Pro Leu Leu Asp Ile Lys Ala Glu Pro
     1145   1150   1155

Gly Ala Val Glu Ala Val His Leu Pro His Phe Val Ala Leu Gln
     1160   1165   1170

Gly Gly His Val Asp Thr Ser Leu Phe Gln Met Ala His Phe Lys
     1175   1180   1185

Glu Glu Gly Met Leu Leu Glu Lys Pro Ala Arg Val Glu Leu His
     1190   1195   1200

His Ile Val Leu Glu Asn Pro Ser Phe Ser Pro Leu Gly Val Leu
     1205   1210   1215

Leu Lys Met Ile His Asn Ala Leu Arg Phe Ile Pro Val Thr Ser
     1220   1225   1230

Val Val Leu Leu Tyr His Arg Val His Pro Glu Glu Val Thr Phe
     1235   1240   1245

His Leu Tyr Leu Ile Pro Ser Asp Cys Ser Ile Arg Lys Glu Leu
     1250   1255   1260

Glu Leu Cys Tyr Arg Ser Pro Gly Glu Asp Gln Leu Phe Ser Glu
     1265   1270   1275

Phe Tyr Val Gly His Leu Gly Ser Gly Ile Arg Leu Gln Val Lys
     1280   1285   1290

Asp Lys Lys Asp Glu Thr Leu Val Trp Glu Ala Leu Val Lys Pro
     1295   1300   1305

1086

Gly Asp Leu Met Pro Ala Thr Thr Leu Ile Pro Pro Ala Arg Ile
    1310   1315   1320

Ala Val Pro Ser Pro Leu Asp Ala Pro Gln Leu Leu His Phe Val
    1325   1330   1335

Asp Gln Tyr Arg Glu Gln Leu Ile Ala Arg Val Thr Ser Val Glu
    1340   1345   1350

Val Val Leu Asp Lys Leu His Gly Gln Val Leu Ser Gln Glu Gln
    1355   1360   1365

Tyr Glu Arg Val Leu Ala Glu Asn Thr Arg Pro Ser Gln Met Arg
    1370   1375   1380

Lys Leu Phe Ser Leu Ser Gln Ser Trp Asp Arg Lys Cys Lys Asp
    1385   1390   1395

Gly Leu Tyr Gln Ala Leu Lys Glu Thr His Pro His Leu Ile Met
    1400   1405   1410

Glu Leu Trp Glu Lys Gly Ser Lys Lys Gly Leu Leu Pro Leu Ser
    1415   1420   1425

Ser

<210> 2622
<211> 179
<212> PRT
<213> Homo sapiens

<400> 2622

Met Ala Ala Leu Gln Lys Ser Val Ser Ser Phe Leu Met Gly Thr Leu
1   5   10   15

Ala Thr Ser Cys Leu Leu Leu Ala Leu Leu Val Gln Gly Gly Ala
            20   25   30

Ala Ala Pro Ile Ser Ser His Cys Arg Leu Asp Lys Ser Asn Phe Gln
            35   40   45

Gln Pro Tyr Ile Thr Asn Arg Thr Phe Met Leu Ala Lys Glu Ala Ser
    50   55   60

```
Leu Ala Asp Asn Asn Thr Asp Val Arg Leu Ile Gly Glu Lys Leu Phe
65                  70              75                  80


His Gly Val Ser Met Ser Glu Arg Cys Tyr Leu Met Lys Gln Val Leu
                85              90                  95


Asn Phe Thr Leu Glu Glu Val Leu Phe Pro Gln Ser Asp Arg Phe Gln
            100             105             110


Pro Tyr Met Gln Glu Val Val Pro Phe Leu Ala Arg Leu Ser Asn Arg
            115             120             125


Leu Ser Thr Cys His Ile Glu Gly Asp Asp Leu His Ile Gln Arg Asn
        130             135             140


Val Gln Lys Leu Lys Asp Thr Val Lys Lys Leu Gly Glu Ser Gly Glu
145             150             155             160


Ile Lys Ala Ile Gly Glu Leu Asp Leu Leu Phe Met Ser Leu Arg Asn
                165             170             175


Ala Cys Ile



<210>   2623
<211>   261
<212>   PRT
<213>   Homo sapiens

<400>   2623

Met Ser Arg Arg Tyr Asp Ser Arg Thr Thr Ile Phe Ser Pro Glu Gly
1               5               10                  15


Arg Leu Tyr Gln Val Glu Tyr Ala Met Glu Ala Ile Gly His Ala Gly
            20              25                  30


Thr Cys Leu Gly Ile Leu Ala Asn Asp Gly Val Leu Leu Ala Ala Glu
        35              40                  45


Arg Arg Asn Ile His Lys Leu Leu Asp Glu Val Phe Phe Ser Glu Lys
    50              55              60


Ile Tyr Lys Leu Asn Glu Asp Met Ala Cys Ser Val Ala Gly Ile Thr
65              70              75                  80


Ser Asp Ala Asn Val Leu Thr Asn Glu Leu Arg Leu Ile Ala Gln Arg
            85              90                  95
```

```
Tyr Leu Leu Gln Tyr Gln Glu Pro Ile Pro Cys Glu Gln Leu Val Thr
        100                 105                 110

Ala Leu Cys Asp Ile Lys Gln Ala Tyr Thr Gln Phe Gly Gly Lys Arg
        115                 120                 125

Pro Phe Gly Val Ser Leu Leu Tyr Ile Gly Trp Asp Lys His Tyr Gly
    130                 135                 140

Phe Gln Leu Tyr Gln Ser Asp Pro Ser Gly Asn Tyr Gly Gly Trp Lys
145                 150                 155                 160

Ala Thr Cys Ile Gly Asn Asn Ser Ala Ala Ala Val Ser Met Leu Lys
                165                 170                 175

Gln Asp Tyr Lys Glu Gly Glu Met Thr Leu Lys Ser Ala Leu Ala Leu
        180                 185                 190

Ala Ile Lys Val Leu Asn Lys Thr Met Asp Val Ser Lys Leu Ser Ala
        195                 200                 205

Glu Lys Val Glu Ile Ala Thr Leu Thr Arg Glu Asn Gly Lys Thr Val
    210                 215                 220

Ile Arg Val Leu Lys Gln Lys Glu Val Glu Gln Leu Ile Lys Lys His
225                 230                 235                 240

Glu Glu Glu Glu Ala Lys Ala Glu Arg Glu Lys Lys Glu Lys Glu Gln
                245                 250                 255

Lys Glu Lys Asp Lys
            260
```

```
<210>  2624
<211>  377
<212>  PRT
<213>  Homo sapiens

<400>  2624
```

```
Met Lys Phe Pro Gly Pro Leu Glu Asn Gln Arg Leu Ser Phe Leu Leu
1               5                   10                  15

Glu Lys Ala Ile Thr Arg Glu Ala Gln Met Trp Lys Val Asn Val Arg
        20                  25                  30
```

```
    Lys Met Pro Ser Asn Gln Asn Val Ser Pro Ser Gln Arg Asp Glu Val
         35              40                  45

    Ile Gln Trp Leu Ala Lys Leu Lys Tyr Gln Phe Asn Leu Tyr Pro Glu
         50              55                  60

    Thr Phe Ala Leu Ala Ser Ser Leu Leu Asp Arg Phe Leu Ala Thr Val
    65              70                  75                  80

    Lys Ala His Pro Lys Tyr Leu Ser Cys Ile Ala Ile Ser Cys Phe Phe
                   85                  90                  95

    Leu Ala Ala Lys Thr Val Glu Glu Asp Glu Arg Ile Pro Val Leu Lys
                   100                 105                 110

    Val Leu Ala Arg Asp Ser Phe Cys Gly Cys Ser Ser Ser Glu Ile Leu
             115                 120                 125

    Arg Met Glu Arg Ile Ile Leu Asp Lys Leu Asn Trp Asp Leu His Thr
         130                 135                 140

    Ala Thr Pro Leu Asp Phe Leu His Ile Phe His Ala Ile Ala Val Ser
    145                 150                 155                 160

    Thr Arg Pro Gln Leu Leu Phe Ser Leu Pro Lys Leu Ser Pro Ser Gln
                   165                 170                 175

    His Leu Ala Val Leu Thr Lys Gln Leu Leu His Cys Met Ala Cys Asn
                   180                 185                 190

    Gln Leu Leu Gln Phe Arg Gly Ser Met Leu Ala Leu Ala Met Val Ser
             195                 200                 205

    Leu Glu Met Glu Lys Leu Ile Pro Asp Trp Leu Ser Leu Thr Ile Glu
         210                 215                 220

    Leu Leu Gln Lys Ala Gln Met Asp Ser Ser Gln Leu Ile His Cys Arg
    225                 230                 235                 240

    Glu Leu Val Ala His His Leu Ser Thr Leu Gln Ser Ser Leu Pro Leu
                   245                 250                 255

    Asn Ser Val Tyr Val Tyr Arg Pro Leu Lys His Thr Leu Val Thr Cys
                   260                 265                 270

    Asp Lys Gly Val Phe Arg Leu His Pro Ser Ser Val Pro Gly Pro Asp
```

1090

```
                275                    280                      285


Phe Ser Lys Asp Asn Ser Lys Pro Glu Val Pro Val Arg Gly Thr Ala
    290             295             300


Ala Phe Tyr His His Leu Pro Ala Ala Ser Gly Cys Lys Gln Thr Ser
305             310             315                 320


Thr Lys Arg Lys Val Glu Glu Met Glu Val Asp Asp Phe Tyr Asp Gly
                325             330             335


Ile Lys Arg Leu Tyr Asn Glu Asp Asn Val Ser Glu Asn Val Gly Ser
            340             345             350


Val Cys Gly Thr Asp Leu Ser Arg Gln Glu Gly His Ala Ser Pro Cys
        355             360             365


Pro Pro Leu Gln Pro Val Ser Val Met
    370             375
```

```
<210>   2625
<211>   575
<212>   PRT
<213>   Homo sapiens

<400>   2625

Met Leu Gly Val Leu Val Leu Gly Ala Leu Ala Leu Ala Gly Leu Gly
1               5               10              15


Phe Pro Ala Pro Ala Glu Pro Gln Pro Gly Gly Ser Gln Cys Val Glu
            20              25              30


His Asp Cys Phe Ala Leu Tyr Pro Gly Pro Ala Thr Phe Leu Asn Ala
        35              40              45


Ser Gln Ile Cys Asp Gly Leu Arg Gly His Leu Met Thr Val Arg Ser
    50              55              60


Ser Val Ala Ala Asp Val Ile Ser Leu Leu Leu Asn Gly Asp Gly Gly
65              70              75              80


Val Gly Arg Arg Arg Leu Trp Ile Gly Leu Gln Leu Pro Pro Gly Cys
            85              90              95


Gly Asp Pro Lys Arg Leu Gly Pro Leu Arg Gly Phe Gln Trp Val Thr
            100             105             110
```

```
Gly Asp Asn Asn Thr Ser Tyr Ser Arg Trp Ala Arg Leu Asp Leu Asn
        115             120             125

Gly Ala Pro Leu Cys Gly Pro Leu Cys Val Ala Val Ser Ala Ala Glu
        130             135             140

Ala Thr Val Pro Ser Glu Pro Ile Trp Glu Glu Gln Gln Cys Glu Val
145             150             155             160

Lys Ala Asp Gly Phe Leu Cys Glu Phe His Phe Pro Ala Thr Cys Arg
            165             170             175

Pro Leu Ala Val Glu Pro Gly Ala Ala Ala Ala Val Ser Ile Thr
            180             185             190

Tyr Gly Thr Pro Phe Ala Ala Arg Gly Ala Asp Phe Gln Ala Leu Pro
        195             200             205

Val Gly Ser Ser Ala Ala Val Ala Pro Leu Gly Leu Gln Leu Met Cys
    210             215             220

Thr Ala Pro Pro Gly Ala Val Gln Gly His Trp Ala Arg Glu Ala Pro
225             230             235             240

Gly Ala Trp Asp Cys Ser Val Glu Asn Gly Gly Cys Glu His Ala Cys
            245             250             255

Asn Ala Ile Pro Gly Ala Pro Arg Cys Gln Cys Pro Ala Gly Ala Ala
            260             265             270

Leu Gln Ala Asp Gly Arg Ser Cys Thr Ala Ser Ala Thr Gln Ser Cys
        275             280             285

Asn Asp Leu Cys Glu His Phe Cys Val Pro Asn Pro Asp Gln Pro Gly
        290             295             300

Ser Tyr Ser Cys Met Cys Glu Thr Gly Tyr Arg Leu Ala Ala Asp Gln
305             310             315             320

His Arg Cys Glu Asp Val Asp Asp Cys Ile Leu Glu Pro Ser Pro Cys
            325             330             335

Pro Gln Arg Cys Val Asn Thr Gln Gly Gly Phe Glu Cys His Cys Tyr
        340             345             350
```

Pro Asn Tyr Asp Leu Val Asp Gly Glu Cys Val Glu Pro Val Asp Pro
        355   360   365

Cys Phe Arg Ala Asn Cys Glu Tyr Gln Cys Gln Pro Leu Asn Gln Thr
        370   375   380

Ser Tyr Leu Cys Val Cys Ala Glu Gly Phe Ala Pro Ile Pro His Glu
385   390   395   400

Pro His Arg Cys Gln Met Phe Cys Asn Gln Thr Ala Cys Pro Ala Asp
                405   410   415

Cys Asp Pro Asn Thr Gln Ala Ser Cys Glu Cys Pro Glu Gly Tyr Ile
            420   425   430

Leu Asp Asp Gly Phe Ile Cys Thr Asp Ile Asp Glu Cys Glu Asn Gly
        435   440   445

Gly Phe Cys Ser Gly Val Cys His Asn Leu Pro Gly Thr Phe Glu Cys
    450   455   460

Ile Cys Gly Pro Asp Ser Ala Leu Ala Arg His Ile Gly Thr Asp Cys
465   470   475   480

Asp Ser Gly Lys Val Asp Gly Gly Asp Ser Gly Ser Gly Glu Pro Pro
                485   490   495

Pro Ser Pro Thr Pro Gly Ser Thr Leu Thr Pro Pro Ala Val Gly Leu
            500   505   510

Val His Ser Gly Leu Leu Ile Gly Ile Ser Ile Ala Ser Leu Cys Leu
        515   520   525

Val Val Ala Leu Leu Ala Leu Leu Cys His Leu Arg Lys Lys Gln Gly
    530   535   540

Ala Ala Arg Ala Lys Met Glu Tyr Lys Cys Ala Ala Pro Ser Lys Glu
545   550   555   560

Val Val Leu Gln His Val Arg Thr Glu Arg Thr Pro Gln Arg Leu
                565   570   575

<210>   2626
<211>   332
<212>   PRT
<213>   Homo sapiens

<400> 2626

Met Ala Ala Val Phe Leu Val Thr Leu Tyr Glu Tyr Ser Pro Leu Phe
1   5   10   15

Tyr Ile Ala Val Val Phe Thr Cys Phe Ile Val Thr Thr Gly Leu Val
            20   25   30

Leu Gly Trp Phe Gly Trp Asp Val Pro Val Ile Leu Arg Asn Ser Glu
            35   40   45

Glu Thr Gln Phe Ser Thr Arg Val Phe Lys Lys Gln Met Arg Gln Val
        50   55   60

Lys Asn Pro Phe Gly Leu Glu Ile Thr Asn Pro Ser Ser Ala Ser Ile
65   70   75   80

Thr Thr Gly Ile Thr Leu Thr Thr Asp Cys Leu Glu Asp Ser Leu Leu
                    85   90   95

Thr Cys Tyr Trp Gly Cys Ser Val Gln Lys Leu Tyr Glu Ala Leu Gln
            100   105   110

Lys His Val Tyr Cys Phe Arg Ile Ser Thr Pro Gln Ala Leu Glu Asp
        115   120   125

Ala Leu Tyr Ser Glu Tyr Leu Tyr Gln Glu Gln Tyr Phe Ile Lys Lys
    130   135   140

Asp Ser Lys Glu Glu Ile Tyr Cys Gln Leu Pro Arg Asp Thr Lys Ile
145   150   155   160

Glu Asp Phe Gly Thr Val Pro Arg Ser Arg Tyr Pro Leu Val Ala Leu
            165   170   175

Leu Thr Leu Ala Asp Glu Asp Asp Arg Glu Ile Tyr Asp Ile Ile Ser
            180   185   190

Met Val Ser Val Ile His Ile Pro Asp Arg Thr Tyr Lys Leu Ser Cys
        195   200   205

Arg Ile Leu Tyr Gln Tyr Leu Leu Leu Ala Gln Gly Gln Phe His Asp
    210   215   220

Leu Lys Gln Leu Phe Met Ser Ala Asn Asn Asn Phe Thr Pro Ser Asn
225   230   235   240

```
Asn Ser Ser Ser Glu Glu Lys Asn Thr Asp Arg Ser Leu Leu Glu Lys
            245                 250                 255

Val Gly Leu Ser Glu Ser Glu Val Glu Pro Ser Glu Glu Asn Ser Lys
            260                 265                 270

Asp Cys Val Val Cys Gln Asn Gly Thr Val Asn Trp Val Leu Leu Pro
            275                 280                 285

Cys Arg His Thr Cys Leu Cys Asp Gly Cys Val Lys Tyr Phe Gln Gln
    290                 295                 300

Cys Pro Met Cys Arg Gln Phe Val Gln Glu Ser Phe Ala Leu Cys Ser
305                 310                 315                 320

Gln Lys Glu Gln Asp Lys Asp Lys Pro Lys Thr Leu
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cgtgcgtgcc tgaacctcac aatggtagtc atggtgaata gcacagatcc acatggtttg   180

cccaacacct ccacaaagaa gctcctggat aatataaaga accctatgta taattggagc   240

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attaagaata cacacacacg cacacacaca cacacctgtc tatactagaa tatttaaaag     540

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1123

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gtaactgccc aaggcatgtt ttgcccacca gatcatggcc cacgtggagg cccacctgcc    3060

tctgtctcac tgaactagaa gccgagccta gaaactaaca cagccatcaa gggaatgact    3120

tgggcggcct tgggaaatcg atgagaaatt gaacttcagg gagggtggtc attgcctaga    3180

ggtgctcatt catttaacag agcttcctta ggttgatgct ggaggcagaa tcccggctgt    3240
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1131

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caaggggtgt tcagttaagg ggagcaacag aggacatgaa aaattgctat gactaaagca   3300

gggacaattt gctgccaaac acccatgccc agctgtatgg ctgggggctc ctcgtatgca   3360

tggaacccccc agaataaata tgctcagcca ccctgtgggc cgggcaatcc agacagcagg   3420

cataaggcac cagttaccct gcatgttggc ccagacctca ggtgctaggg aaggcgggaa   3480

ccttgggttg agtaatgctc gtctgtgtgt tttagtttca tcacctgtta tctgtgtttg   3540

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<212>   DNA
<213>   Homo sapiens

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ccaatgggct cagaccctcc caccgcctgc tgcttttctt acaccgcgag gaagcttcct    240

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cacctgagcc cggatgcttc tccatgagac acatctcctc catactcagg actcctctcc    480

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ctgtcactgt ttctctgctg ttgcaaatac atggataaca catttgattc tgtgtgtttt    660

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<211>   1451
<212>   DNA
<213>   Homo sapiens

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tgcccctgct gggagtgggg ctgaacacga caattctgac gcccaatggg aatgaagaca    120

ccacagctga tttcttcctg accactatgc ccactgactc cctcagtgtt tccactctgc    180

ccctcccaga ggttcagtgt tttgtgttca atgtcgagta catgaattgc acttggaaca    240

gcagctctga gccccagcct accaacctca ctctgcatta ttggtacaag aactcggata    300
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atgataaagt ccagaagtgc agccactatc tattctctga agaaatcact tctggctgtc      360

agttgcaaaa aaaggagatc cacctctacc aaacatttgt tgttcagctc caggacccac      420

gggaacccag gagacaggcc acacagatgc taaaactgca gaatctggtg atcccctggg      480

ctccagagaa cctaacactt cacaaactga gtgaatccca gctagaactg aactggaaca      540

acagattctt gaaccactgt ttggagcact tggtgcagta ccggactgac tgggaccaca      600

gctggactga caatcagtg gattatagac ataagttctc cttgcctagt gtggatgggc       660

agaaacgcta cacgtttcgt gttcggagcc gctttaaccc actctgtgga agtgctcagc      720

attggagtga atggagccac ccaatccact gggggagcaa tacttcaaaa gagaatcctt      780

tcctgtttgc attggaagcc gtggttatct ctgttggctc catgggattg attatcagcc      840

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cctactgggc ccccccatgt tacaccctaa agcctgaaac ctgaacccca atcctctgac     1140

agaagaaccc cagggtcctg tagccctaag tggtactaac tttccttcat tcaacccacc     1200

tgcgtctcat actcacctca ccccactgtg gctgatttgg aattttgtgc ccccatgtaa     1260

gcaccccttc atttggcatt ccccacttga gaattaccct tttgccccga acatgttttt     1320

cttctccctc agtctggccc ttccttttcg caggattctt cctccctccc tctttccctc     1380

ccttcctctt tccatctacc ctccgattgt tcctgaaccg atgagaaata aagtttctgt     1440

tgataatcat c                                                          1451
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<212>   DNA
<213>   Homo sapiens

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ctgcctctaa agcgtgcgtc tatcggtggt gctgtctctt gttccggcgt caatggcttg      180

actcggtgga attccattgt ttcgactcgc cgactcgttc ctgttcgttc aattaactcg      240

gaatcggact cggactccga cttccctcac gagaatcagc agggaaatcc aggtttgggg      300

aaatttaagg aataccaaga atgggactca tggacggcca agttctccgg tggagcaaac      360

attccgtttc tcatgctcca attgcctcag atcatcctca atacccagaa tcttttggcg      420
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ggaaacaata ccgctctttc ggctgtccca tggctgggaa tgttgactgg tttgttagga      480

aacctttcgt tgctttctta ttttgctaag aagagagaaa aagaagcagc tgtggtgcaa      540

acactgggag tggtctctac tcacattgtg cttgcacagc tcacaatggc tgaagcaatg      600

cctattcagt attttgttgc tacttcagct gttgtcacca tcggtctcat tgtgaactgt      660

ttgtactatt tcggtaagct tagcaaaact gtgtggcaac tgtgggaaga cgttatcact      720

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aacagtatct tgcctgggac aactgctttt ggtattgctg tggcagctat aatcatggct      840

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gcaactctta tgttcatgtg gatgccagtt tcccaaatgt ggacaaattt tctaaacccg      960

gacaacataa aaggcttatc gtcaatcaca atgttgctct cgatgatggg aaacgggctt     1020

atgatccctc gagcactatt tatccgtgat ttgatgtggc tcactggttc gctatgggca     1080

actctctttt atggatatgg aaatattctt tgcttatacc tggtaaattg caccagccag     1140

tcattcttcg tggcagctac aattggtttg atctcatgga taggactggc tttgtggaga     1200

gatgcagtgg cttatggtca caactcgccg tttagatctt tgaaagaact tgtttttgga     1260

ccgtaatgaa tgaatgtaca cgccataaac gccctttgtt caagcaagtc catagagatt     1320

acatgtattt tcattctttt ttcctaaggg ttataagaca actactctgt aatttcatgt     1380

attttttac ttgaatcata tagtaaaata atgtctgata tcaaaaaaaa aaaaaaaaa      1439


<210> 2806
<211> 954
<212> DNA
<213> Homo sapiens

<400> 2806
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tttttgaatc ttggttataa acccaatttt aaagggcgat gtatccagcg ttgtgaaggc      180

aacagagtgt acccatattt atatttttat aaaataccta taagactgtg aatctcttgt      240

gctaatggct gagttaattg aaggatcgtt ttgccccttt ttagcctccc agagcttcga      300

ggactcaatt cgaacccgaa atcctgccgt gggggagggg ttgcgtcgag acctgggccc      360

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ccaattttct atgcagcccc acaccccttg ttgttttgat cctgagaaat aaaagggagg      480

ctgaattatt caaattaaaa tgaggtttcc ccttcatgga agtgctgctg acccttcgtg      540

cagaaatggg gagcacttga ggacacaggt gggtggaggc cctttgtgcg tggctggtcg      600
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1134

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taggcttata tcgaagctgt gtgtgggtca cggggtgatc actgctaact ggataaagtt     840

tgtgcagcac attcctgagt gtacgatatt gacctgtagc ccagcgtgaa aaatttataa     900

ataaattttt cattgatctt tttatattaa aaaaaaaaaa aaaaaaaaaa gttg          954
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<211>  459
<212>  DNA
<213>  Homo sapiens

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ctggaacatc aggatgggac catgtttgaa aatcgggtct ttccaaatgt aattaagtaa     180

ggcgaggcca tactgcattt acaatgggcc caatccagtg tccctatgag agacggaaga     240

ggagacacag acacaaagca ggaggccaca taaagacaga ggcagagact gaagtgatgc     300

tgccccaagc ccaggggatg cctggagtcc ccaggagctg ggagaggcag gaagggaccc     360

tcccctagag tctcttggag ggaactgata caattgcaga gtgcactaaa cagttgcccc     420

aaaagacata tcttgtttta aggcccagac ctgaaattt                            459
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<210>  2808
<211>  553
<212>  DNA
<213>  Homo sapiens

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tgctcacccc agactcttag gaagggtcta gagaaatgag aggagcccaa gccaggggcc     360

agctccgaga aagggtaacc tccacgcttc tctctcccaa attggaaatg aagacaggtt     420

ttcaaaggca caggctcccc ctgccagctt ctaggatctt ccttggtgtg caatgggcca     480

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<210> 2809
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<212> DNA
<213> Homo sapiens

<400> 2809
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cggaagcaga agcccaggag gtcagtctgc cgtggctggt gatggaacac ctggataaaa   1620

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agcataaaat caacccctcg gcggggggagg cgttcccaca agcggtggac gtgctgctct      2160

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1137

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<212> DNA
<213> Homo sapiens

<400> 2810

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cacttacctt gccatctaga aaagaacgtt gtcaattcgt agtcaaacca atgttgtcaa    360
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cagttggttc attccttcag gacctacaaa atgaagataa gggtatcaaa actgcagcca      420

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atgattttaa acttgtcatt aataaaatag catatgatgt gcagtgtcca aagagagaaa      540

aaccaagtaa tgagcacact gctgagatgg aacacatgaa atccttggtt cacagactat      600

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caaagcaaca gcactttgat gtgcagcaat acaacaagtt aaaagaagac cttgctaagg      1020

ctaaagaatc cctgaaacag gcgcgtcatt ctctctgttt gcaaatgcaa gtagaagaac      1080

tcaatgaaaa gaattaatct tacagtttta aatgtcgtca gattttccat tatgtattga      1140

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<213>   Homo sapiens

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gcctgctggg cagcggacag atgcagatca ccctgtgggg aagtctggca gctgtcgcca      180

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cgcgacagca tagtgggggac catgagaacc tgatgaacgt gccttcagac aaggagatgt      300

tcagccgttc agttactagc ctggcaacag atgctcctgc cagcagtgag cagaatgggg      360

cactcaccaa tggggacatt ctttcagagg acagtactct gacctgcatg cagcattacg      420

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1145

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1148

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1149

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1155

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<212>   DNA
<213>   Homo sapiens

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ctcgggtgcg tcctctctca ggagtgcacg aagttcaagg tcagcagctg ccgggaatgc     180

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cccaccatgg aggagattga gaatgccttc caaggaaatc tgtgccgctg cacaggctac    540
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1160

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1162

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1164

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<213> Homo sapiens

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cccagcaatg tacctaagtt tgggtcccca aagccacctg tggcagtcaa accttcttct     240

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tacgatgatg tggatacctc tgatttccct gtttcatcag cagagatgag tcaaggaact   2040

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t                                                                     1501
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gttcatgaag ccgagcagta caaggctgag gatgaggccc agagggacag agtggctgcc     1620

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agggacaaga ttcccgaaga ggacaggcgc aaaatgcaag acaagtgtcg ggaagtcctt     1740

gcctggctgg agcacaacca gctggcagag aaggaggagt atgagcatca gaagagggag     1800

ctggagcaaa tctgtcgccc catcttctcc aggctctatg gggggcctgg tgtccctggg     1860

ggcagcagtt gtggcactca gcccgccag ggggacccca gcaccggccc catcattgag      1920

gaggttgatt ga                                                          1932
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<210> 2831
<211> 2035
<212> DNA
<213> Homo sapiens

<400> 2831

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cgcgccctca ctgcagcccc tgcgtcgccg ggaccctcgc gcgcgaccag ccgaatcgct      180

cctgcagcag agccaacatg cccatcactc ggatgcgcat gagaccctgg ctagagatgc      240

agattaattc caaccaaatc ccggggctca tctggattaa taaagaggag atgatcttcc      300

agatcccatg gaagcatgct gccaagcatg gctgggacat caacaaggat gcctgtttgt      360

tccggagctg ggccattcac acaggccgat acaaagcagg ggaaaaggag ccagatccca      420

agacgtggaa ggccaacttt cgctgtgcca tgaactccct gccagatatc gaggaggtga      480

aagaccagag caggaacaag ggcagctcag ctgtgcgagt gtaccggatg cttccacctc      540

tcaccaagaa ccagagaaaa gaaagaaagt cgaagtccag ccgagatgct aagagcaagg      600

ccaagaggaa gtcatgtggg gattccagcc ctgatacctt ctctgatgga ctcagcagct      660

ccactctgcc tgatgaccac agcagctaca cagttccagg ctacatgcag gacttggagg      720

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tgtacactaa catttccccc gagctcttgg cctttgcatt tatttataca gtgccttgct     1860

cggggcccac cacccctca agccccagca gccctcaaca ggcccaggga gggaagtgtg     1920
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1171

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agcgccttgg tatgacttaa aattggaaat gtcatctaac cattaagtca tgtgtgaaca    1980

cataaggacg tgtgtaaata tgtacatttg tctttttata aaaagtaaaa ttgtt         2035


<210> 2832
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<212> DNA
<213> Homo sapiens

<400> 2832
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gtatataatg taatgttttg taagttatta atttatatat ctaacattgc ctgccaatgg     180

tggtgttaaa tttgtgtaga aaactctgcc taagagttac gactttttct tgtaatgttt     240

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cggggggttg gggggaaact tggcaccagc catcccaggc agagcaccac tgtgatttgt     720

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acctaccggt ctgtcagtga gatggcttct aacaagttca aaagaatgct gaaccgggag    1020

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actttcttag acaagcagaa tgatgtggag atcccatctc ctacccagaa agacagggag    1140

aaaaagaaaa agcagcagct catgacccag ataagtggag tgaagaaatt aatgcatagt    1200

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ctggccaagg agctggaaga cctgaacaaa tggggtctta acatctttaa tgtggctgga    1320

tattctcaca atagacccct aacatgcatc atgtatgcta tattccagga aagagacctc    1380

ctaaagacat tcagaatctc atctgacaca tttataacct acatgatgac tttagaagac    1440

cattaccatt ctgacgtggc atatcacaac agcctgcacg ctgctgatgt agcccagtcg    1500
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acccatgttc tcctttctac accagcatta gacgctgtct tcacagattt ggagatcctg      1560

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gatatgtcta aacatatgag cctgctggca gacctgaaga caatggtaga aacgaagaaa      1860

gttacaagtt caggcgttct tctcctagac aactataccg atcgcattca ggtccttcgc      1920

aacatggtac actgtgcaga cctgagcaac cccaccaagt ccttggaatt gtatcggcaa      1980

tggacagacc gcatcatgga ggaattttc cagcagggag acaaagagcg ggagagggga      2040

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ttcatcgact acattgtcca tccattgtgg gagacatggg cagatttggt acagcctgat      2160

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caaagtccct caccaccact ggacgagcag aacagggact gccagggtct gatggagaag      2280

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catgtcttta aaatgcctgt tgaatacctg gagtttagta tcaacttcta cacagataag      2940

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agaataaaat tgaacaaatt aggggtaga aaggagcagt ggtgtcgttc accgtgagag       3240

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1173

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acgacttttt cttgtaatgt tttgtattgt gtattatata acccaaacgt cacttagtag      3600

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tttgctcaca gatgattctt ctgattcttc tgaatgctcc cgaactactg actttgaaga      3960

ggtagcctcc tgcctgccat taagcaggaa tgtcatgttc cagttcatta caaaagaaaa      4020

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<212>   DNA
<213>   Homo sapiens

<400>   2833
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atccctggag aatctgctgg aagacccaga aggcgtgaaa agatttaggg aatttttaaa       180

aaaggaattc agtgaagaaa atgttttgtt ttggctagca tgtgaagatt ttaagaaaat       240

gcaagataag acgcagatgc aggaaaaggc aaaggagatc tacatgacct ttctgtccag       300

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cgacagctac agccgctttc ttaagtctga cttgtttttta aaacacaagc gaaccgagga       480

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cacatgagcc cccaaaaagc cgggactggc agctttaaga agcaaaggaa tttcctctca       600

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caat                                                                    664
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<213>   Homo sapiens

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cctggcacca tggccccact gaagatgctg gccctggtca ccctcctcct gggggcttct       180

ctgcagcaca tccacgcagc tcgagggacc aatgtgggcc gggagtgctg cctggagtac       240

ttcaagggag ccattcccct tagaaagctg aagacgtggt accagacatc tgaggactgc       300

tccagggatg ccatcgtttt tgtaactgtg cagggcaggg ccatctgttc ggaccccaac       360

aacaagagag tgaagaatgc agttaaatac ctgcaaagcc ttgagaggtc ttgaagcctc       420

ctcaccccag actcctgact gtctcccggg actacctggg acctccaccg ttggtgttca       480

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<212>   DNA
<213>   Homo sapiens

<400>   2835
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ccaccagcct ccatgtatca tcatgtgtca taactcagtc aagctcagtg agcattctca       120

gcacattgcc tcaacagctt caaggtgagc cagctcaaga ctttgctctc caccaggcag       180

aagatgacag actgtgaatt tggatatatt tacaggctgg ctcaggacta tctgcagtgc       240

gtcctacaga taccacaacc tggatcaggt ccaagcaaaa cgtccagagt gctacaaaat       300

gttgcgttct cagtccaaaa agaagtggaa aagaatctga agtcatgctt ggacaatgtt       360

aatgttgtgt ccgtagacac tgccagaaca ctattcaacc aagtgatgga aaaggagttt       420

gaagacggca tcattaactg gggaagaatt gtaaccatat ttgcatttga aggtattctc       480

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tattttgttg cggagttcat aatgaataac acaggagaat ggataaggca aaacggaggc       600

tgggaaaatg ctttgtaaa gaagtttgaa cctaaatctg ctggatgac ttttctagaa         660

gttacaggaa agatctgtga aatgctatct ctcctgaagc aatactgttg accagaaagg       720

acactccata ttgtgaaacc ggcctaattt ttctgactga tatggaaacg attgccaaca       780

catacttcta cttttaaata aacaactttg atgatgtaac ttgaccttcc agagttatgg       840

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<213>   Homo sapiens

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cctgtgagac aagagcatct tggatgtagg acaatggaag agttagatgc cttattggag     120

gaactggaac gctccaccct tcaggacagt gatgaatatt ccaacccagc tcctcttccc     180

ctggatcagc attccagaaa ggagactaac cttgatgaga cttcggagat cctttctatt     240

caggataaca caagtccctt gccggcgcag ctcgtgtata ctaccaatat ccaggagctc     300

aatgtctaca gtgaagccca agagccaaag gaatcaccac caccttctaa aacgtcagca     360

gctgctcagt tggatgagct catggctcac ctgactgaga tgcaggccaa ggttgcagtg     420

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ggccattgtg catcctgcca gaaaccgatt gctgggaagg tgatccatgc tctagggcaa     600

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tgtggtggct gcaatcgccc agtgttggaa aactaccttt cagccatgga cactgtctgg     960

cacccagagt gctttgtttg tgggggactgc ttcaccagtt tttctactgg ctccttcttt    1020

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cttctctaat ttggtcctga tacttgtttc ttttcacgtt ttcccatttg ccctgtggct          1680

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acatcattga taaataaact ggcttgtggt ttcaataaaa aaaaaaaaaa aaaaaaaaaa          1860

aaaaaaaaaa aaaaa                                                           1875
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tcctgggcat ggagggtcag caggtcatcc tgcacctgcc cctatcccag aaggggccct          180

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caagattcct gcccacagga agggccacag gcccgctaag ccccaaaggc aggatctaga    1560

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1179

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1181

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tgtctgcctt gagaacttat gaaccatatg gatccctggt tcaacaaata cgaattctgc    660

tgctgggtcc aattggagct gggaagtcca gctttttcaa ctcagtgagg tctgtttttcc   720

aagggcatgt aacgcatcag gctttggtgg cactaatac aactgggata tctgagaagt     780

ataggacata ctctattaga gacgggaaag atggcaaata cctgccgttt attctgtgtg    840

actcactggg gctgagtgag aaagaaggcg cctgtgcag ggatgacata ttctatatct     900

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atcatgacta cattgattcc ccatcgctga aggacagaat tcattgtgtg gcatttgtat    1020

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gaagggagtt ggtaaacgct ggtgtggtac atgtggcttt gctcactcat gtggatagca    1140

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atctaaggga ggaaattatc aactgtgcac aaggaaaaaa atagatatgt gaaaggttca    1440

cgtaaatttc ctcacatcac agaagattaa aattcagaaa ggagaaaaca cagaccaaag    1500

agaagtatct aagaccaaag ggatgtgttt tattaatgtc taggatgaag aaatgcatag    1560

aacattgtag tacttgtaaa taactagaaa taacatgatt tagtcataat tgtgaaaaat    1620

agtaataatt tttcttggat ttatgttctg tatctgtgaa aaataaatt tcttataaaa    1680

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<210>   2842
<211>   2665
<212>   DNA
<213>   Homo sapiens

<400>   2842
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ccacccctgc gcctgccgag aggcccctgc ccaacccgga gggactggat agcgacttcc    120
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gtcgagagag  ttacatccct  ggaatatgtg  tggccagagt  ttaccatggc  tggctgtttg      300

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ccttcatgat  cagagagagt  gagaccaaga  aagggtttta  ctcactgtcg  gtgagacaca      420

ggcaggtaaa  gcattaccgc  attttccgtc  tgccgaacaa  ctggtactac  atttccccga      480

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gccaaaaaaa  aaaaaagat   gctaagtcct  aacccccaac  agaagtgttc  acagtgtaga     1800

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attagagaca  ggtgagggac  actcaggagc  tcattttcca  gctgctcttc  agagtggaag     1920

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1187

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ctaaagaatt aactcacccg gtactttatt ctaagaaggg tctggcatcc atatgaggaa    2040

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ttaagagaca agggagaaaa cacaatgtat agccagagaa ggagaagctc ccatccaaat    2160

cctactagga agagagtggg ctgcagatga atctgtgact catgtttccc tgtttcaaag    2220

ggatcctggg gaaggagggg aacatgcttg cagtatctct ccctgtctgt ctgctcacat    2280

aagcattccg tccatctaag ctcatcgtgc tactggtatg tgtatgtgca gttacacagt    2340

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ttccaaaagg ctatttcaaa ggaaccagcc cacgtatgag aaatgaatgt aacactgtgg    2460

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ttatgtgttg ttttccgttg tgacgaatgt gattggaaca tttggggagc acccagaggg    2580

atttttcagt gggaagcatt acactttgct aaatcatgta tttattcctg attaaaacaa    2640

acctaataaa tatttaaccc ttggc                                         2665
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<210>  2843
<211>  1061
<212>  DNA
<213>  Homo sapiens

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aagtttctgg ctttgacgct ctttccaatg gagcacattt tatatgcaac tacggaccag    660

gagggaatta cccaacttgg ccatataaga gaggagccac ctgcagtgcc tgccccaata    720

atgacaagtg tttggacaat ctctgtgtta accgacagcg agaccaagtg aaacgttact    780

actctgttgt atatccaggc tggcccatat atccacgtaa cagatacact tctctctttc    840

tcattgttaa ttcagtaatt ctaatactgt ctgttataat taccattttg gtacagctca    900
```

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agtaccctaa tttagttctt ttggactaat acaattcagg aaagaaaaaa cccaaaaacc       960

aacctcattc acatatggct ttttttttaac caataacaat taggtgtact tctattttaa     1020

aacatttcag aaaaaaatat atgttatagc aatactctta c                         1061
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<210> 2844
<211> 2088
<212> DNA
<213> Homo sapiens

<400> 2844
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cctccatgtt gaccaagcct ctacaggggc ctcccgcgcc ccccgggacc cccacgccgc     240

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gtaaggggggg ctttggcacc gtcttcgcag acaccgcct cacagatcga ctccaggtgg     360

ccatcaaagt gattccccgg aatcgtgtgc tgggctggtc ccccttgtca gactcagtca     420

catgcccact cgaagtcgca ctgctatgga aagtgggtgc aggtggtggg caccctggcg     480

tgatccgcct gcttgactgg tttgagacac aggaaggctt catgctggtc ctcgagcggc     540

ctttgcccgc ccaggatctc tttgactata tcacagagaa gggcccactg ggtgaaggcc     600

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ttgtccatcg tgacatcaag gatgagaaca tcctgataga cctacgccgt ggctgtgcca     720

aactcattga ttttggttct ggtgccctgc ttcatgatga accctacact gactttgatg     780

ggacaagggt gtacagcccc ccagagtgga tctctcgaca ccagtaccat gcactcccgg     840

ccactgtctg gtcactgggc atcctcctct atgacatggt gtgtgggggac attcccttttg     900

agagggacca ggagattctg gaagctgagc tccacttccc agcccatgtc tccccagact     960

gctgtgccct aatccgccgg tgcctggccc ccaaaccttc ttcccgaccc tcactggaag    1020

agatcctgct ggacccctgg atgcaaacac agccgagga tgttacccct caacccctcc     1080

aaaggaggcc ctgcccctttt ggcctggtcc ttgctaccct aagcctggcc tggcctggcc    1140

tggcccccaa tggtcagaag agccatccca tggccatgtc acagggatag atggacattt    1200

gttgacttgg ttttacaggt cattaccagt cattaaagtc cagtattact aaggtaaggg    1260

attgaggatc aggggttaga agacataaac caagtttgcc cagttccctt cccaatccta    1320

caaaggagcc ttcctcccag aacctgtggt ccctgatttt ggaggggggaa cttcttgctt    1380

ctcattttgc taaggaagtt tattttggtg aagttgttcc cattttgagc cccgggactc    1440
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ttattttgat gatgtgtcac cccacattgg cacctcctac taccaccaca caaacttagt    1500

tcatatgctt ttacttgggc aagggtgctt tccttccaat accccagtag cttttatttt    1560

agtaaaggga ccctttcccc tagcctaggg tcccatattg ggtcaagctg cttacctgcc    1620

tcagcccagg attttttatt ttgggggagg taatgccctg ttgttacccc aaggcttctt    1680

tttttttttt tttttttttg ggtgagggga ccctactttg ttatcccaag tgctcttatt    1740

ctggtgagaa gaaccttaat tccataattt gggaaggaat ggaagatgga caccaccgga    1800

caccaccaga caataggatg ggatggatgg ttttttgggg gatgggctag gggaaataag    1860

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ctgagccggg attgtccaat tactaaaatg taaataatca cgtattgtgg ggaggggagt    1980

tccaagtgtg ccctcctttt ttttcctgcc tggattattt aaaaagccat gtgtggaaac    2040

ccactattta ataaaagtaa tagaatcaga aaaaaaaaa aaaaaaaa                   2088
```

<210> 2845
<211> 1666
<212> DNA
<213> Homo sapiens

<400> 2845

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agaattattg attgaccgtc tttattctgt gggctctgat tctccaatgg gaataccaag     120

ggatggtttt ccatactgga acccaaaggt aaagacactc aaggacagac atttttggca     180

gagcatagat gaaaatggca agttccctgg cttttccttct gctcaacttt catgtctccc    240

tcctcttggt ccagctgctc actccttgct cagctcagtt ttctgtgctt ggaccctctg     300

ggcccatcct ggccatggtg ggtgaagacg ctgatctgcc ctgtcacctg ttcccgacca     360

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tgtatgcaga tggaaaggaa gtggaagaca ggcagagtgc accgtatcga gggagaactt     480

cgattctgcg ggatggcatc actgcaggga aggctgctct ccgaatacac aacgtcacag     540

cctctgacag tggaaagtac ttgtgttatt ccaagatgg tgacttctat gaaaaagccc      600

tggtggagct gaaggttgca gcactgggtt ctaatcttca cgtcgaagtg aagggttatg     660

aggatggagg gatccatctg gagtgcaggt ccaccggctg gtaccccaa ccccaaatac      720

agtggagcaa cgccaaggga gagaacatcc agctgtgga agcacctgtg gttgcagatg      780

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cagaccccctt cttcaggagc gcccagccct ggatcgcagc cctggcaggg accctgccta     960
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tcttgctgct gcttctcgcc ggagccagtt acttcttgtg gagacaacag aaggaaataa        1020

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cagagcggga aataagccta agagagagcc tccaggagga actcaagagg aaaaaatcca        1140

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tggaaaaatg gccctcttca agcctggtga ggaaatgctt cagatgaggc tccaccttgt        1260

taaataaatt ggatgtatgg aaaaatagac tgcagaaaag gggaactcat ttagctcacg        1320

agtggtcgag tgaagattga aaattaacct ctgagggcca gcacagcagc tcatgcctgt        1380

aatcctagca ctttggaagg ctgaggaggg cggatcacaa ggtcaggaga tcaagaccat        1440

cctggctaac acggtgaaac cccgtctcta ctaaaaatac aaaaaataaa aaattagccg        1500

ggcatggtga cgggcacctg tagtcccagc tactcgggag gctgaggcag gagaatggca        1560

tgaacccgga aggcagagct tgcagtgagc cgagatcacg ccactgcact ccagcctggg        1620

agacagagcg agactctgtc tcaagaaaaa aaaaaaaaaa aaaaaa                        1666
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<211>  850
<212>  DNA
<213>  Homo sapiens
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gcctgcaaac ccaggttgtc tgcattcaaa agagcattct attaaagcta ccttaatttg        120

gcgcttattt ttcttaatca tgtttctgac aatcatagtg tgtggaatgg ttgctgcttt        180

aagcgcaata agagctaact gccatcaaga gccatcagta tgtcttcaag ctgcatgccc        240

agaaagctgg attggttttc aaagaaagtg tttctatttt tctgatgaca ccaagaactg        300

gacatcaagt cagaggtttt gtgactcaca agatgctgat cttgctcagg ttgaaagctt        360

ccaggaactg aatttcctgt tgagatataa aggcccatct gatcactgga ttgggctgag        420

cagagaacaa ggccaaccat ggaaatggat aaatggtact gaatggacaa gacagtttcc        480

tatcctggga gcaggagagt gtgcctattt gaatgacaaa ggtgccagta gtgccaggca        540

ctacacagag aggaagtgga tttgttccaa atcagatata catgtctaga tgttacagca        600

aagccccaac taatctttag aagcatattg gaactgataa ctccatttta aaatgagcaa        660

agaatttatt tcttatacca acaggtatat gaaaatatgc tcaatatcac taataactgg        720

gaaaatacaa atcaaaatca tagtaaaata ttacctgttt tcatggtgct aatattacct        780

gttctcccac tgctaatgac atacccgaga atgagtaatt tataaataaa agagatttaa        840

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<212> DNA
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<400> 2847
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atcctgagct gcacttacct gtgagagtct tcaaactttt aaaccttgcc agtcaggact   660

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ttcaagtttg gagaaaaaaa aaaaaaaaaa aaaaaaaaa a   761

<210> 2848
<211> 5426
<212> DNA
<213> Homo sapiens

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aaaagagaaa ggaagaatgg actacagcca ccaaacgtcc ctagtcccat gtggacaaga   240

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gccggagggt gaccagatgc caagctccac agactccagg ggcctgaagc ccctgcagga   600

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ggacacccca cagctgatgc gcacacgcag tgatgttggg gtgcgtcgcc gtggcaatgt    660

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ctacaaccat aagacatccg tgttcacacc agcctatggc tctgtcacca acgtccgcat    780

caacagcacc atgaccaccc cacaggtcct gaagctgctg ctcaacaaat ttaagattga    840

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gaaggccacc gattacccgc tgattgcccg aatcctccag ggcccatgtg agcagatctc    960

caaagtgttc ctaatggaga aggaccaggt ggaggaagtc acctacgacg tggcccagta   1020

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tcgggaagta aagaagctga tgcgcaagta caccgtgctc cggctaatga ttcgacagag   1140

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gaaaaagata aaccatccgt ggggtagatg caataagccc acgtattttt acactggaaa   1860

cgttgattgt tttaaatgac aaagacatat gtgatgttct atgtggaaac ctgtgaagag   1920

tggattctgc ctccatctct gcctccatgg ctacctttag gagacagaga agatcctgtg   1980

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tgctgcagaa attggggaaa gctgtagaaa ccaaagatga acgatttgaa caaagcgcta    180

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ctaagtctgt agacacgaaa gcgagttcat ctaaatttag tagaattcta actcctaagg   240

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gccaaatgcc tccccaagta aaggatcaaa agaaattata tctgaataga gttgggttta   660

aatgcactga acgtgaaagc atttctctca ccaaattaga aagttcaccc aggaagcttc   720

ataaagataa gagacaggaa aataaacata gaccttttt accggtgaaa ggtaacacag   780

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<212>   DNA
<213>   Homo sapiens

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cgttccaact cgaagtgcca gggccagctg gaggtctacc tcaaggacgg atggcacatg     240

gtttgcagcc agagctgggg ccggagctcc aagcagtggg aggaccccag tcaagcgtca     300

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<212>   DNA
<213>   Homo sapiens

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ggagactcag gagttttgag agcaaaatga caacacccag aaattcagta aatgggactt    180

tcccggcaga gccaatgaaa ggccctattg ctatgcaatc tggtccaaaa ccactcttca    240

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tggggctgt ccagattatg aatgggctct tccacattgc cctgggggggt cttctgatga    360

tcccagcagg gatctatgca cccatctgtg tgactgtgtg gtaccctctc tggggaggca    420

ttatgtatat tatttccgga tcactcctgg cagcaacgga gaaaaactcc aggaagtgtt    480

tggtcaaagg aaaaatgata atgaattcat tgagcctctt tgctgccatt tctggaatga    540

ttctttcaat catggacata cttaatatta aaatttccca ttttttaaaa atggagagtc    600

tgaattttat tagagctcac acaccatata ttaacatata caactgtgaa ccagctaatc    660

cctctgagaa aaactcccca tctacccaat actgttacag catacaatct ctgttcttgg    720

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<212>  DNA
<213>  Homo sapiens

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ttcgatacct cagagcatta ttttcataat gagctgtgtt cacaatcttt ttaggttaac   180

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<211> 430
<212> DNA
<213> Homo sapiens

<400> 2863

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agcagcccct cagcatccag cagcatgagc ggaggcattt tccttttctt cgtggccaat    180

gccataatcc acctcttctg cttcagttga ggtgacacgt ctcagcctta gccctgtgcc    240

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atgccagaca tcaccaggtt gtagaagttg acaggcagtg ccatgggggc aacagccaaa    360

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<212> DNA
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<213>   Homo sapiens

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ttggctttgc ctttctggac acagaagtat ttgtgacagg gcaaagccca acaccttccc       180

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ctcacaccac tgcattctca cccgcaagca cctttgaaag agaaaatgac ttctcagaga       300

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tatataacaa ggaaactaaa ttatttacag caaagctaaa tgttaatgag aatgtggaat       720

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tcccgcgggt gttcagcaag tttcctataa aggaagctcg aaagcccttt aaccagaata   1980

aaaaccgtta tgttgacatt cttccttatg attataaccg tgttgaactc tctgagataa   2040

acggagatgc agggtcaaac tacataaatg ccagctatat tgatggtttc aaagaaccca   2100

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cagaccacgg ggtgcctgag gatcctcact tgctcctcaa actgagaagg agagtgaatg   2460

ccttcagcaa tttcttcagt ggtcccattg tggtgcactg cagtgctggt gttgggcgca   2520

caggaaccta tatcggaatt gatgccatgc tagaaggcct ggaagccgag aacaaagtgg   2580

atgtttatgg ttatgttgtc aagctaaggc gacagagatg cctgatggtt caagtagagg   2640

cccagtacat cttgatccat caggctttgg tggaatacaa tcagtttgga gaaacagaag   2700

tgaatttgtc tgaattacat ccatatctac ataacatgaa gaaaagggat ccacccagtg   2760

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agcacattgg aaatcaagaa gaaaataaaa gtaaaaacag gaattctaat gtcatcccat   2880

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attcagatga atcctctgat gatgacagtg attcagagga accaagcaaa tacatcaatg   3000

catcttttat aatgagctac tggaaacctg aagtgatgat tgctgctcag ggaccactga   3060

aggagaccat tggtgacttt tggcagatga tcttccaaag aaaagtcaaa gttattgtta   3120

tgctgacaga actgaaacat ggagaccagg aaatctgtgc tcagtactgg ggagaaggaa   3180

agcaaacata tggagatatt gaagttgacc tgaaagacac agacaaatct tcaacttata   3240

cccttcgtgt ctttgaactg agacattcca agaggaaaga ctctcgaact gtgtaccagt   3300

accaatatac aaactggagt gtggagcagc ttcctgcaga acccaaggaa ttaatctcta   3360

tgattcaggt cgtcaaacaa aaacttcccc agaagaattc ctctgaaggg aacaagcatc   3420

acaagagtac acctctactc attcactgca gggatggatc tcagcaaacg gaatattttt   3480

gtgctttgtt aaatctctta gaaagtgcgg aaacagaaga ggtagtggat atttttcaag   3540
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tggtaaaagc tctacgcaaa gctaggccag gcatggtttc cacattcgag caatatcaat      3600

tcctatatga cgtcattgcc agcacctacc ctgctcagaa tggacaagta aagaaaaaca      3660

accatcaaga agataaaatt gaatttgata atgaagtgga caaagtaaag caggatgcta      3720

attgtgttaa tccacttggt gccccagaaa agctccctga agcaaaggaa caggctgaag      3780

gttctgaacc cacgagtggc actgaggggc cagaacattc tgtcaatggt cctgcaagtc      3840

cagctttaaa tcaaggttca taggaaaaga cataaatgag gaaactccaa acctcctgtt      3900

agctgttatt tctattttg tagaagtagg aagtgaaaat aggtatacag tggattaatt       3960

aaatgcagcg aaccaatatt tgtagaaggg ttatatttta ctactgtgga aaaatattta      4020

agatagtttt gccagaacag tttgtacaga cgtatgctta tttaaaatt ttatctctta       4080

ttcagtaaaa aacaacttct ttgtaatcgt tatgtgtgta tatgtatgtg tgtatgggtg      4140

tgtgtttgtg tgagagacag agaaagagag agaattcttt caagtgaatc taaaagcttt      4200

tgcttttcct ttgttttat gaagaaaaaa tacattttat attagaagtg ttaacttagc       4260

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tactatttta cttctagaga tagtacataa aggtggtatg tgtgtgtatg ctactacaaa      4440

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aatgtctttt taagcttatt taattaaaaa atttccagtg agcttatcat gctgtcttta      4560

catggggttt tcaattttgc atgctcgatt attccctgta caatatttaa aatttattgc      4620

ttgatacttt tgacaacaaa ttaggttttg tacaattgaa cttaaataaa tgtcattaaa      4680

ataaataaat gcaatatgta ttaatattca ttgtataaaa atagaagaat acaaacatat      4740

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tgaaaaatat gatattgcat atgcatagtt cccatgttaa atcccattca taactttcat      4860

taaagcattt actttgaatt tc                                              4882
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<210>   2866
<211>   1702
<212>   DNA
<213>   Homo sapiens

<400>   2866
agactcaaca agagctccag caaagacttt cactgtagct tgacttgacc tgagattaac       60

tagggaatct tgagaataaa gatgagctct gaaaattgtt tcgtagcaga gaacagctct      120

ttgcatccgg agagtggaca agaaaatgat gccaccagtc cccatttctc aacacgtcat      180

gaagggtcct tccaagttcc tgtcctgtgt gctgtaatga atgtggtctt catcaccatt      240
```

```
ttaatcatag ctctcattgc cttatcagtg ggccaataca attgtccagg ccaatacaca        300

ttctcaatgc catcagacag ccatgtttct tcatgctctg aggactgggt tggctaccag        360

aggaaatgct actttatttc tactgtgaag aggagctgga cttcagccca aaatgcttgt        420

tctgaacatg gtgctactct tgctgtcatt gattctgaaa aggacatgaa ctttctaaaa        480

cgatacgcag gtagagagga acactgggtt ggactgaaaa aggaacctgg tcacccatgg        540

aagtggtcaa atggcaaaga atttaacaac tggttcaacg ttacagggtc tgacaagtgt        600

gtttttctga aaacacagga ggtcagcagc atggaatgtg agaagaattt atactggata        660

tgtaacaaac cttacaaata ataaggaaac atgttcactt attgactatt atagaatgga        720

actcaaggaa atctgtgtca gtggatgctg ctctgtggtc cgaagtcttc catagagact        780

ttgtgaaaaa aaattttata gtgtcttggg aattttcttc caaacagaac tatggaaaaa        840

aaggaagaaa ttccaggaaa atctgcactg tgggctttta ttgccatgag ctagaagcat        900

cacaggttga ccaataacca tgcccaagaa tgagaagaat gactatgcaa cctttggatg        960

cactttatat tattttgaat ccagaaataa tgaaataact aggcgtggac ttactattta       1020

ttgctgaatg actaccaaca gtgagagccc ttcatgcatt tgcactactg gaaggagtta       1080

gatgttggta ctagatactg aatgtaaaca aaggaattat ggctggtaac ataggttttt       1140

agtctaattg aatcccttaa actcagggag catttataaa tggacaaatg cttatgaaac       1200

taagatttgt aatatttctc tcttttagga gaaatttgcc aatttacttt gttatttttc       1260

cccaaaaaga atgggatgat cgtgtattta ttttttttact tcctcagctg tagacaggtc       1320

cttttcgatg gtacatattt ctttgccttt ataatctttt atacagtgtc ttacagagaa       1380

aagacataag caaagactat gaggaatatt tgcaagacat agaatagtgt tggaaaatgt       1440

gcaatatgtg atgtggcaaa tctctattag gaaatattct gtaatcttca gacctagaat       1500

aatactagtc ttataatagg tttgtgactt tcctaaatca attctattac gtgcaatact       1560

tcaatacttc atttaaaata tttttatgtg caataaaatg tatttgtttg tattttgtgt       1620

tcagtacaat tataagctgt ttttatatat gtgaaataaa agtagaataa acacaaaaaa       1680

aaaaaaaaaa aaaaaaaaaa aa                                                 1702
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<210>   2867
<211>   563
<212>   DNA
<213>   Homo sapiens

<400>   2867
tgaagagtgg aagagacatt ccagaggagg attgccttcg tcagggtaac ggggtgggct         60

gctcaggtgc cctacccttc accccttct gtatcagatt ggacctccca ctcccatctc        120
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1226

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actctgcgtg tacaatcttc catatccgca agttcactgg cactcttctg gcacctgggc      180

aagatcccag aacagaggat ggagtgactg gcctcacaga gcttagtgcc cgactcaggg      240

gaaatgggac tggtgcatgg gaaatggtca gcctaggata ggacacgaga gtctgaaatt      300

caaagcaacc agcttgaagt ggtttgagaa gctggaagca aacatgggct agagagatag      360

ggcagaagtc aagacgagga tctggactga tgtggagaca agtagccacg gaagcatgaa      420

ctgtatcctg cacaaagtcc ctcttccccg cctcctaatt cattatgccc aaaagtgctt      480

acgtgaaatt ccagcccaga gtactcatga cttgagagac gtggacggag ccagcttcta      540

ccttgcttgg acgtctctcc cct                                             563
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<210>   2868
<211>   822
<212>   DNA
<213>   Homo sapiens

<400>   2868
gatcctcttt ccctcttccc caccctcatt ataggctgcg aagcctcctc tctgcacctg       60

ataacaaaac gtcatatgag aagcatggta gatccttagc atcaaaggtt gaggactctt      120

attctgatta taagtagtgg ctcttgacta caatcaagtc tcaaataata gtgtaagaga      180

ataaagcaga ataataagac taagttaaca gtttaggctt cttttggaatc atgcgggcct      240

agatgaaaat cccaacactg tcctttacta gctaagtgac cttgagcaac tgattacacc      300

ctttgatgcc tcagttttct cctctgtgtt gtggggtaat agtaatatct acttcctggg      360

gttgttcgtg aagattaatt aacaattata cttgtcaaag ctttagcaca gtgccctgta      420

tgttatttcc ttggccaaac tttcttactc tgccatttgt tcaatgtcct aatgagcatg      480

aacactacat taggtatcat gcagaacact ctaaagataa gtattatgat ctctatttca      540

cagataagga aatttaaact gggagaggct aaagggctga cttgcccaag gtcacttgaa      600

actaatatgc cagcagagac agaattagga gccaagtata tttaagagcc aagtgtattg      660

aacctaaaat ctgggctcct aaataccaag cttcactggc tctctggtcc cagtgagagt      720

tggtgctaaa aagtattccg gaatgaaaag ttctcttcca gagaccctgg ccttccaaag      780

cggtcacctg atagggaagt cttacggcta ggaagttaca aa                        822
```

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<210>   2869
<211>   1182
<212>   DNA
<213>   Homo sapiens

<400>   2869
gaattccgct agactaagtt ggtcatgatg cagaagctac tcaaatgcag tcggcttgtc       60
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ctggctcttg ccctcatcct ggttctggaa tcctcagttc aaggttatcc tacgcagaga      120

gccaggtacc aatgggtgcg ctgcaatcca gacagtaatt ctgcaaactg ccttgaagaa      180

aaaggaccaa tgttcgaact acttccaggt gaatccaaca agatcccccg tctgaggact      240

gacctttttc caaagacgag aatccaggac ttgaatcgta tcttcccact ttctgaggac      300

tactctggat caggcttcgg ctccggctcc ggctctggat caggatctgg gagtggcttc      360

ctaacggaaa tggaacagga ttaccaacta gtagacgaaa gtgatgcttt ccatgacaac      420

cttaggtctc ttgacaggaa tctgccctca gacagccagg acttgggtca acatggatta      480

gaagaggatt ttatgttata aaagaggatt ttcccacctt gacaccaggc aatgtagtta      540

gcatatttta tgtaccatgg ttatatgatt aatcttggga caaagaattt tatagaaatt      600

tttaaacatc tgaaaaagaa gcttaagttt tatcatcctt tttttctca tgaattctta       660

aaggattatg ctttaatgct gttatctatc ttattgttct tgaaaatacc tgcattttt       720

ggtatcatgt tcaaccaaca tcattatgaa attaattaga ttcccatggc cataaaatgg      780

ctttaaagaa tatatatata tttttaaagt agcttgagaa gcaaattggc aggtaatatt      840

tcatacctaa attaagactc tgacttggat tgtgaattat aatgatatgc cccttttctt      900

ataaaaacaa aaaaaaaata atgaaacaca gtgaatttgt agagtggggg tatttgacat      960

attttacagg gtggagtgta ctatatacta ttacctttga atgtgtttgc agagctagtg     1020

gatgtgtttg tctacaagta tgattgctgt tacataacac cccaaattaa ctcccaaatt     1080

aaaacacagt tgtgctgtca atacctcata ctgctttacc ttttttttcct ggatatctgt     1140

gtattttcaa atgttactat atattaaagc agaaatataa cc                        1182
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<210>   2870
<211>   537
<212>   DNA
<213>   Homo sapiens

<400>   2870
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tccacacacg gttcaaaaat caaattatga aaggtatata gttaagacta gctgttcaaa      120

acaaaagcag cctttcacga ttatgtgagg gaacaaaggg caacacccctt attagtgcca      180

gtttaaaacc ttccttcaca ccctggactc tgccctatgt gcgtcctggt tgattttaac      240

ctacatccta acatttaggc cagtttcctt tcatccttct tacaaatata aaatctctta      300

cccttctcta atattatttg gcattccaaa ataggaagt gtcatggtta aaaccaaatc        360

aaaggcaatt ctgactgtgc acagctcagc ctccacccaa cctcagaacc actggatcag      420

accaggtttt agtttttttg tacattact tgataactaa gacacaattt gcctacagtg        480
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aaatgcttag ttctgacacg tatcgctcaa tccactgtca agaattcata acaaagt          537


<210>   2871
<211>   503
<212>   DNA
<213>   Homo sapiens

<400>   2871
tttttttta gtataagcat atcccatgca attttggaa catatactga aaaattatac          60

tgaaagtcaa atcaaactga tctggcaacc ctatctagtt acctacaatc taccgtgttc         120

ccataaaggc tttaagtaat ttggaatccg ttaacacatt tagcttattc tttccccatt         180

ggttccctgg gcttagagca gacagcaagc ctttctttca cttggccaag aaggcacctc         240

cttttcccat ctaacaggtt gggatcacag ctagttggtg gcaaagcagt ccacatgcat         300

gttgtttatc tttttaagga tatggtcata gtttccaccc ctccttacct ctcctgactc         360

accatctcta agccttccca cacaggccct gctgcagccg ccggagaact gaccgtgctt         420

gtgggtccac tccctcctcc cacatcttcc ttaagcctca atccatccca gttcatccat         480

gccctttcca aagtcctgtg att                                               503


<210>   2872
<211>   448
<212>   DNA
<213>   Homo sapiens

<400>   2872
tttttttttc caataaaacc actgcagatc taaaatactc tcttggttta aaccacacaa         60

aaagcaattt aataggcaca atcctacagg ttttctgaga gaaataagga agagatcaag         120

tgtaagctac gtaaaattca cgttttgcac cttataaagc aaacttcaat gttgttaaat         180

aaccagtaga aaatatctac aaaaatcaaa ctaaacacct gttcttataa gcagcagtcc         240

tctattttct ctctaaacca tatattccca actcagaccc tctctgtgac ccactgttcc         300

caaagcatag agtctgaaga agaaatataa aacatttcgg acattcgttc acaaaaccaa         360

attagacctt tccacaaagt acaggagata aaacagaaac acttccattt tatctaattt         420

atggcaaata gttcaaggaa tgcctatt                                          448


<210>   2873
<211>   449
<212>   DNA
<213>   Homo sapiens

<400>   2873
tttttcttgg tcatctacct ttaatgtttg gtcttaagtc ttataaacac atatcattta         60

atataaaaaa aaaaggatac tcacctgacc ctttcagatg tttaacgatt cgtcttcctc         120
```

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ctcggggatg cttttctga aggatgctgg cctggggaaa acagaaccgg aagggtaaca    180

cctgccatac ctaataaaac caatgagaaa tacgaggccc cgagatggag tttctgggag    240

attcctgaag agcacgctgt ggcgattgag atgatgacgc gtggagctgc ccccctccct    300

gtctcccaca tcagggacct gtccctctac aggaggaatt ctactcctga ggccaccgtc    360

ccctgtcact caggtggcct gcatgcacag cacttctggc tctgaaagcg tcacctcatg    420

gctgtttctg ccttcttgct ggtgaattt                                     449
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<210> 2874
<211> 3362
<212> DNA
<213> Homo sapiens

<400> 2874
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tgtggagatc aggtcttctc caagaaaaaa aaaagaaaa aaaaaaacaa catggctgca    120

aaggagaaac tggaggcagt gttaaatgtg ccctgaggg tgccaagcat catgctgttg    180

gatgtcctgt acagatggga tgtcagctcc tttttccagc agatccaaag aagtagcctt    240

agtaataacc ctcttttcca gtataagtat ttggctctta atatgcatta tgtaggttat    300

atcttaagtg tggtgctgct aacattgccc aggcagcatc tggttcagct ttatctatat    360

tttttgactg ctctgctcct ctatgctgga catcaaattt ccagggacta tgttcggagt    420

gaactggagt ttgcctatga gggaccaatg tatttagaac ctctctctat gaatcggttt    480

accacagcct aataggtca gttggtggtg tgtactttat gctcctgtgt catgaaaaca    540

aagcagattt ggctgttttc agctcacatg cttcctctgc tagcacgact ctgccttgtt    600

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gtttcttttg ttgccttggg tgttctcaca ctctgcaagt tttacttgca gggttatcga   1020

gctttcatga atgatcctgc catgaatcgg ggcatgacag aaggagtaac gctgttaatc   1080

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attatccttt tcattgtcgt agcttctatc ctacagtcta tgttagaaat tgcagatcct   1200

attgttttgg cactgggagc atctagagac aagagcttgt ggaaacactt ccgtgctgta   1260
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agcctttgtt  tattttatt  ggtattccct  gcttatatgg  cttatatgat  ttgccagttt   1320

ttccacatgg  attttggct   tcttatcatt  atttccagca  gcattcttac  ctctcttcag   1380

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tggctgtatg  tccaggagac  ctgccctctg  tgccactgcc  atctgaaaaa  ctcctcccag   1860

cttccaggat  taggaactga  gccagttcta  cagcctcatg  ctggagctga  gcaaaacgtc   1920

atgtttcagg  aaggtactga  accccaggc   caggagcata  ctccagggac  caggatacag   1980

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tttgacccca  aagaatatcc  tcacagtgcg  aaagatgaag  cacatcctgt  tgaatcagcc   2100

tagaggagaa  gcagcaggaa  tgatgctttg  atactctgga  ggagaagtta  actcaagatg   2160

gaattcatgt  tctgatttga  ggaatgaaaa  tgagatgatc  aggcaggaaa  ctgacattcc   2220

aaggatctaa  tccaggaagt  actctcagtg  gggaccacct  gctttcatcc  cctgacattg   2280

tgggagaaat  tttgcaatgt  atgctaatca  aaatgtattt  atatgttctc  tgctgatgtt   2340

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gtgagagaga  aataaaatca  gattttgagt  gttgaaggga  ctgaggaagt  gaggataaag   2460

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gtgtactttt  caatcctgtg  taatgtttaa  ttcttgcaac  tgaatcaaaa  cagtgttaaa   3000

ttatggcaat  atttgcactt  tgggaatgag  tacataactg  tatgatcaca  ctctgcaaat   3060

gccactttta  aagctgttaa  tagactttgc  accttttctt  tgacaaggat  gtgtcatatt   3120
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1231

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taaattttta cattcatcat ggctacaggt agaactgggg agggggaat gtaatttttt       3180

atgggaattt tgatatgaaa agaaactagt catttattta tacaataggc ttggctcaaa       3240

aagtgttttt cagacctcgg tattcctaat gtgggatgtg actttatttt atttttagta       3300

gcaaatttgg atgtagactg acagacatag ctgaatgtct taataaattt aaatttgaag       3360

at                                                                       3362
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<210>   2875
<211>   591
<212>   DNA
<213>   Homo sapiens

<400>   2875
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aattttccat aggcctagat tttcaagaag tccaatatct ctcacttgaa gtgtcttttc       120

cctggagtag attgggagat ttgagggata tctgtccaaa gatgagacag tctgtttcta       180

gtttcccatc cagcctgatg gggcgtctac agttgttacc acaaggtgtc gctgttgaac       240

agattctggt gcagtctagt gcatagctgt ccacttctag agtgatcact tgctgggcca       300

agttcctctc cttaagtggt gtctcacatt aaggttccca aattacagac tcattaattc       360

accctaataa gctcatccag gcagtttagg tcttcagggg cttccagcct ccaacacaca       420

ttgggccaaa accagcctgt accaccagct ccaagccctg tgttgaatct aggtcattgg       480

tccagatgcc ccttcattct gggcctgtgg tgtcctttcc agacagcaga cctcagttaa       540

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<213>   Homo sapiens

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catggttact ggttccggga aggagccatt atatccgggg actctccagt ggccacaaac       240

aagctagatc aagaagtaca ggaggagact cagggcagat tccgcctcct tggggatccc       300

agtaggaaca actgctccct gagcatcgta gacgccagga ggaggataa tggttcatac        360

ttctttcgga tggagagagg aagtaccaaa tacagttaca aatctcccca gctctctgtg       420

catgtgacag acttgaccca caggcccaaa atcctcatcc ctggcactct agaacccggc       480
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cactccaaaa accttacctg ctctgtgtcc tgggcctgtg agcagggaac acccccgatc      540

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ggcaatgggt ttatagacat tatgtgagtt cctgctata ttaacatcat cttgagactt      1260

tgcaagcaga gagtcgtgga atcaaatctg tgctctttca tttgctaagt gtatgatgtc     1320

acacaagctc cttaaccttc catgtctcca ttttcttctc tgtgaagtag gtataagaag     1380

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<213>  Homo sapiens

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ggcgggccgc ggtggacacc tactgcagac acaactacgg ggttggtgag agcttcacag      420

tgcagcggcg agttgagcct aaggtgactg tgtatccttc aaagacccag cccctgcagc      480

accacaacct cctggtctgc tctgtgagtg gtttctatcc aggcagcatt gaagtcaggt      540

ggttccggaa cggccaggaa gagaaggctg gggtggtgtc cacaggcctg atccagaatg      600

gagattggac cttccagacc ctggtgatgc tggaaacagt tcctcggagt ggagaggttt      660
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acacctgcca agtggagcac ccaagtgtga cgagccctct cacagtggaa tggagagcac        720

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agccaacagg attcctgagc tgaaatgcag atgaccacat tcaaggaaga accttctgtc        900

ccagctttgc agaatgaaaa gctttcctgc ttggcagtta ttcttccaca agagagggct        960

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tttgtgctcc cctttgccta aaccgtatgg cctcccgtgc atctgtactc accctgtacg       1140

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<212>  DNA
<213>  Homo sapiens

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gtaacccagg aggaagccca cggcgtcctg caccggcgcc ggcgcgccaa cgcgttcctg        180

gaggagctgc ggccgggctc cctggagagg gagtgcaagg aggagcagtg ctccttcgag        240

gaggcccggg agatcttcaa ggacgcggag aggacgaagc tgttctggat ttcttacagt        300

gatggggacc agtgtgcctc aagtccatgc cagaatgggg gctcctgcaa ggaccagctc        360

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<210> 2879
<211> 1257
<212> DNA
<213> Homo sapiens

<400> 2879
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gctgcgagaa cagcatcatc agcatcatgc tattacaatc ccaaaccatg ggggtttctc    180

acagctttac accaaagggc atcactatcc ctcaaagaga gaaacctgga cacatgtacc    240
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agatcctgtg ttgcctgttg atttcaagtc tgggggccat cttggttttt gctccctacc       360

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tgtgaaacaa actaaaaaaa aaaagcttt tgttttgtat ttgtttacta tgagtcgtta      1020

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<212>   DNA
<213>   Homo sapiens

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aaccaagtcc cgagaaaaga aagtgaatag tgttagcacg aggaggaagg aagaaatgga       180

gattagattg gatactcttt ctgcatcact gggtagatcc agcactttaa atgactgcaa       240

cttggaagat aaattagctt ggtatgaagg tgaagcttac atgtggcatc actggaagcc       300

ttttcctgaa aaccctctct ggacatgtct tgatttccaa atagcacaag ttggaccctg       360

ggactactgc tcctcttgta ttcgccacac acgtctcaag tcttcctgct cagatatgga       420

tctcctacat tcatggcgaa gcagcagttt tgggaatttc gatcgttttc ggaataattc       480

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cacgccaagt ccctatgaca ctgactccct caaaatcaag aaaggagaca tcatagacat      960

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agatataaaa gagagtcacc tcattgaatt aaatattgaa aacccagatg acagaagaag     1260

gttactatca gctgctgaaa acttccttga agaagaaatt attcaagagc aagaaaatga     1320

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ggaaatgttt tgtctttaag tgtaaatatt ttaaaatttg acataccata atgttaataa     2160

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<210> 2881
<211> 1847
<212> DNA
<213> Homo sapiens

<400> 2881

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caacacctta gaaggtgttg cttaatttat ttctagaaaa gcagcccaga gtcagtcatt       360

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<212>   DNA
<213>   Homo sapiens

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accaggagca ggttttgcgg aaccccatg acgcaggccc agccggactg ccgggcattg      1620
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gcaaaaaaaa aaaaaaaaaa aaaaaaaaa aaaaaaaaa a                            1841
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<210> 2883
<211> 2243
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (39)..(39)
<223> n is a, c, g, t or u

<400> 2883
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tttacaattc acaaatgtac aaagaatttt atagatgcat ccataattca cattttgtgt      180

cattatcacc attttctcct aaattacata aaacttattt tatttattga catgtgcttc      240

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tcctatttat gtaccatagt ttataaatgt attgacattt aagtgataat ttattatggt      360

ttttgctatt ataacttatt gaattgatga aatgacatac ttttattaac tgatttttct      420

aatattaatt tctagttcca tgaggcttcc acttggatgg taaaaagggt agacagcatt      480

ctacttatat gcataaatta atctaggagt gaattttatt tatctgggaa taatttttag      540

atatggcaac tctcattcat ttgacaagaa aaatctaaag ctcataaacc ctgaatccta      600

tatgcttact ctcacaaaaa tctctaaatg tcctgctggg atttatccac agtttagatt      660

agacctggaa tacatatggt catgcaacaa tgatcttaga acaggacttt aacttggctt      720

taggaactga ggctgagagt aatagaattg attttttgtg tgtgtgtgaa gctcctatta      780

taataatgag aatactttga ttcactcagt taaagttttc ccctgattta ttgtgtacat      840

acaatgaagg atcaagaaag agaaattttt aaatggaagc attagccaga caagtttgac      900

ctcacagttt tactagggga tatatcacct agttttggat ctatttctaa catcttaaca      960

ttgtgaaaag agtcttggga aactggttaa atcccaaaga atgctgcaat aggaggttgg     1020

cccttatgag ttatttaata tcttgagctg cttcggaaaa tgttgctgag caggcattga     1080

agagtatcga taaaatttat tgagaatttg tttattatga ttaacagagg taaaagccag     1140

tatattactg attaatatag gtaaaagcca gttaagaaat tgggaatgct ttctcttctg     1200
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ctttcttcta cgatgcacaa ggcgtttcac atttatgccc ctatgaaaat tactaggctg      1260

tcctagtcat tagatctttc agcagtttgt agttttagag cttctaagtt gacttctgtc      1320

ttttctattc atacaattac acattctgtg atgatatttt tggctcttga tttacattgg      1380

gtactttcac aacccactgc tcatgaaatt tgcttttgta ctactggttg tttttgcata      1440

ggcccctcca ggccacgacc aggtgtttgg attttataaa cgggccgttt gcattgtgaa      1500

ctgagctaca acaggcaggc aggggcagca agatggtgtt gcagacccag gtcttcattt      1560

ctctgttgct ctggatctct ggtgaggaat taaaaagtgc cacagtcttt tcagagtaat      1620

atctgtgtag aaataaaaaa aattaagata tagttggaaa taatgactat ttccaatatg      1680

gatccaatta tctgctgact tataatacta ctagaaagca aatttaaatg acatatttca      1740

attatatctg agacagcgtg tataagttta tgtataatca ttgtccatta ctgactacag      1800

gtgcctacgg ggacatcgtg atgacccagt ctccagactc cctggctgtg tctctgggcg      1860

agagggccac catcaactgc aagtccagcc agagtgtttt atacagctcc aacaataaga      1920

actacttagc ttggtaccag cagaaaccag gacagcctcc taagttgctc atttactggg      1980

catctacccg ggaatccggg gtccctgacc gattcagtgg cagcgggtct gggacagatt      2040

tcactctcac catcagcagc ctgcaggctg aagatgtggc agtttattac tgtcagcaat      2100

atgatactat tcccactttc ggcggaggga ccaaggtgga gatcaaacgt aagtgcactt      2160

tcctaatact ttttcttata aggtttttaaa tttggagcgt ttttgtgttt gagatattag      2220

ctcaggtcaa ttccaaagag tac                                              2243
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<210> 2884
<211> 374
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (91)..(91)
<223> n is a, c, g, t or u

<220>
<221> misc_feature
<222> (151)..(151)
<223> n is a, c, g, t or u

<220>
<221> misc_feature
<222> (155)..(155)
<223> n is a, c, g, t or u

<220>
<221> misc_feature

<222>   (312)..(312)
<223>   n is a, c, g, t or u

<220>
<221>   misc_feature
<222>   (319)..(319)
<223>   n is a, c, g, t or u

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tgggccccat ccccaaattg ggttattagg ntctcctcca gatagctcag cattccagct   120

ttggctgaca agcctcactc agctgactct ntttnagttg cactattaaa cgtcttccat   180

gcaggcttta tagggaagga caaggcaaag aacaaagcag tcaacaataa ggaaaccaag   240

ccctcacagg aaagaaagcc tgattcaaga aaacaaagtt tgaaacaagg catatttata   300

tttaaaaatg gnattaagnt tcttaaagtg gcttccataa tccttccctt aattattatg   360

ttaccattta tgat   374

<210>   2885
<211>   580
<212>   DNA
<213>   Homo sapiens

<220>
<221>   misc_feature
<222>   (1)..(1)
<223>   n is a, c, g, t or u

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gactgaatat ccctcttgtg cggccttcta aaacctcccg tccaaagcga aatatattgc   120

cctctatttta tacttttaca gcatttggca cacaagtaca gagtagtagc tttttatcac   180

attctctgat aattatatag atatggtatt tcttagctct ctctccaact ggctaataag   240

ttgctttttg tctgagtgcc taattttgtg ttttgtgtct gagtgcctca gttcctcaaa   300

aaaaggtttt ttgattagtt cattattcat ttgaacatgg aaattatgct cactagtggc   360

aaatgccact aaccgtattc cagaagctag gtgtcatgtt tgcaataaga tatattatcc   420

cttctacaag tcacctttta tttcaggcat ttgtaaatgc ccattaataa agtatggttc   480

ataaatttta ccttgtaagt gcctaagaaa tgagactaca agctccattt cagcaggaca   540

caataaatat tattttataa tgccgaaaaa aaaaaaaaaa   580

<210>   2886
<211>   836
<212>   DNA
<213>   Homo sapiens

<400> 2886

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gatctcttgg gatcctgaaa gggggcagga aaggctgggg tcccagtcca ccctaatggt     60

atctgagtgt cctagggctt cagttttccc acctgtccaa tgggaccctt tctgtcctca    120

ccctacaagg ggcacaaagg gatgacacca aacctggcag gaacttttca cgcaatcaag    180

ggaaggaaag gcattcctgg cagagggaac agcatgccaa gcgtgagaag gctcagagta    240

aggaggttaa gagcccaagt attggagcct acagttttgc cccttccatg cagtgtgaca    300

gtgggcaagt cctttccct ctctgggtct cagttctgtc ccctgcaaaa tggtcagagc     360

ttacccctg gctgtgcagg gtcaactttc tgactggtga gagggattct catgcaggtt      420

aagcttctgc tgctcctcct cacctgcaaa gcttttctgc cacttttgcc tccttggaaa    480

actcttatcc atctctcaaa actccagcta ccacatcctt gcagccttcc ctcatatacc    540

cccactacta ctgtagccct gtccttccct ccagccccac tctggccctg gggctgggga    600

agtgtctgtg tccagctgtc tcccctgacc tcagggttcc ttgggggctg gctgaggcc     660

tcagtacaga gggggctctg gaagtgtttg ttgactgaat aaacggaatt cagtgcgaaa    720

acaaaaaaat aggaaataaa agatctcgga aaatagcatt ttgttaaaac cttgggggggt   780

aaaaccccgg ggagttttaa cggaaaaatt ccagggaaca caacttgggg gccaaa        836
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<210> 2887
<211> 742
<212> DNA
<213> Homo sapiens

<400> 2887

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ttttgtttag ctaaagtcat ggggacaact cttcaattta gaacttaagt tgaattataa     60

aaatgatgga tataagtggt agctgtatct agtgaagtgt ctgtcagtaa gtgaaacatt    120

ttttggtggt ggcttatcca caaacagttt agttgtagaa taaaacttat gagtgacatc    180

tggaaagtaa ccatgctaag atggcaagca cactggaaac aattaggcca cttggctttc    240

ttttgctgta ttgtttata agcctacttt acctcccagt cttggaaaca agttttagtt     300

ttttattggt ttggagacta gagccaatag tataatgttc tcaaaggaaa cagacttgag    360

ttgttggatt agaggaacta acccaactta tatgattttg tttttggttt ttgtcgtgta    420

gttatggcac tgtcttattt ggaacatttg caactaggga taatacaaca tttttaactc    480

tcatttgaca acctactact aatcacagac cacaagggta atgaccaaat ttatgtggtt    540

tttgcactcc atagttgtct tagcccaatc tttctatact cttacgatta ctggggttaa    600

cgcttctgtg aggaccttct ggctcttgag atacctaaa tatttacaga tacttagata     660

tcttgaagat agaataggat atcgagattg taccaaatag gaatatcagg agtatggtac    720
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aaatgagcag atacctgttg aa   742

<210>   2888
<211>   440
<212>   DNA
<213>   Homo sapiens

<400>   2888
ttttttgggt tttaaggagt ttattgctaa tctgtaaaac agaaagagac aggagataag   60

catgacaaaa tatagggaag aaatgacttt tgcctaaact tccaaattgt gtacaattga   120

agcctctgct ttatagctct tagcacacct ctcaaataag aaggcagtac tgggaaggct   180

ctgaacctgt ggcagaacca ctgatagctg tggagctatt ccaaggagtc tgggaatcag   240

ggggattatc aagatcattg ttagaataaa ttaatcttac tgtatatata gcagaagttt   300

tcaagcatat gtaaatgcta ctaataacca ataattaca ccttgttttt ctttaaactg   360

taactctcaa gtatgtctct acataatttt ttgatggtag tgtctgcatg ctcaaaaagc   420

ttgaaaacac tactggagaa   440

<210>   2889
<211>   524
<212>   DNA
<213>   Homo sapiens

<400>   2889
tgcttattga aactgaaggg atgttgggaa agacagactg ggagctttct ctaaatttta   60

atacagcatc agtgcttcct ataatgtcca ggttaggaga gaagcaaatg gagctttact   120

aaggaagaga aagtgatcaa taccagtgag aaaggtgaaa aaaaaaaaaa acaaacaaaa   180

acgaaaaaaa aacctaagca aattcagtga gaaaagaaaa agcagaactt agagtcctta   240

cccttcaatt taaggaagga gagttattgc ctagcagaat cttgaaataa aatttcctta   300

gaaagcccca gaaagttttg tgtgtattgc aagtccaaag gataaggaga acttctatat   360

gctttcttct tatttccact gggcaaagta ctgctccatc aagactcagc ccgccatgag   420

gctttccaat caactctcaa ccaccacaac agttagggct ttttcctcta tgttgcaaag   480

cactttctgc ataactcaga atgcaaaatg tactcattca tttg   524

<210>   2890
<211>   575
<212>   DNA
<213>   Homo sapiens

<400>   2890
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt   60

tttttggac ccaaaaaaaa aaaactttta aggaaggggg acccagttaa aacccctcc   120

```
aaatgcggcc caaccctgcc ccacggaaac cggccatggc aacccctaaa taaaaagggg        180

tttttgaggc ggccggcccc cacccaaagg atgcccccaa tttttttttg ccagggggga        240

atgtccttgg acacgggggcc ccaaaattcc ccatgccggg ggtttgtact ttaaaagggc       300

ttcctaacct cctccgggtg ttcctaaggg ccatgctgga gctaaaactt gtaaaaaaag        360

gcccaggctt cccccaggtc cgagtaaatt ttcacagggg gggggaacca ccccctggcc        420

ttggggattt tccgttgact ccaaaacagt ttggccacgg ccagaaccac atgggggtaa        480

tgctcacact ttttaaggga atccacgctt tggggcctcc tgtgggggcct tgcctggagg       540

aagatggcct cacaccaaag gataccggag ttggg                                   575
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<210> 2891
<211> 467
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (428)..(428)
<223> n is a, c, g, t or u

<400> 2891
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cctggccatt tttgcccgga tccccaagac cccggcgttg gcacggccca taccgaaact        120

atgcaagggt tcgaaattat cctttccctc acggacaact cgagctttct ccttattata        180

ctaccttccc taccggcatg accggaccgg tcacctgggg ggccacgcac atttctacag        240

gaaaactggc tcccttcttg ggggccgagg gcttcctgtg gaaaaggatg agtttggagc        300

ggtactccct cagccggtgc acgttgatct ggagggactc cgcggacttg ctcctgctcc        360

tgggatccac aaaaatgcgc taaggtccgg cccaccttct tgggaatgcc gcccaccctg        420

agctcctnca ggatgaatcc gcggccgact cgcaccttct tgggtac                     467
```


<210> 2892
<211> 473
<212> DNA
<213> Homo sapiens

<400> 2892
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ttcatttaat ggcacatgat gatgcacaca aaacttcaac tctcagtctg gaatcagccc        60

acaggtctgc agctataaaa atcatctcga aaacatgaga tttcagagat ccagttctca        120

gtgttacctt gaagatgaca atttatgaag aaacaggtga ttttaatccg aaattgccag        180

gaaacaaatt actcctcaaa agcccttgga aagtaataag atagctaggc agaaaaaaaa        240

agattctgca aaactaaact taatgtgtat tcatctagac ctgaattaaa aataaaattc        300
```
```

```
cactataaaa agaattttc aaaatgttag gcccaagaat atggccatat tgttccatct      360

tgaagaaccc agttgattca gtttcattac tggcctcccc actcttctaa gtaagtccct      420

cactataaac atttacgaat tccatctcag cattagtact aaacaatatt cat            473
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<210> 2893
<211> 546
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (280)..(280)
<223> n is a, c, g, t or u

<220>
<221> misc_feature
<222> (537)..(537)
<223> n is a, c, g, t or u

<400> 2893
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cggtagtcaa ctcagttact tttaatatta aatgtctttt tatcctagta aactactccc      60

ttgcttaatg ggagaacttg caaatgagat ttaaaacatt gtaattttta taaggtaaca      120

gaagctagat ccctttcact gttcatctca agctattgat cttgtcagtg ttgtacagat      180

ctagaatggg ttgtcaggga taaggtcact gatctgatgg tgattgttga catctgctga      240

ctccacacaa caaccctagg ggaccggtgc tttgagcatn cttattttca gatggtttgc      300

ccacttcatg cagttaacag ctgttggtgt tgggcttcaa atccaggtct ttcggacatc      360

aaatcccagc ctcttaacaa ctcaccaagc agtgattact actccccaac ataggggcag      420

tatgtacaag tcatgttgaa ctaatacagt ttctttcttt gataggaata ctaattttgt      480

tgaacaagaa aatatgtact ggataagagt aaggcatttg acaaggcgtc ctgtganatc      540

tgtgaa                                                                546
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<210> 2894
<211> 1993
<212> DNA
<213> Homo sapiens

<400> 2894
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actcatttat accaggaaac agacaagaga acaagaggct gccgaagaca aaacttctct      60

gcaagcacct gtgcacagca atgtgcgtgg gcatctgtga gaagaagaga atctgtgaag      120

tttgagcaag cggccttccc aagatgtacc gaatatctca actgatgtca acaccagtag      180

caagttcttc caggttggaa agagaatatg ctggagagct gtctcccacg tgcattttcc      240

caagtttcac ctgtgattcc ctggatggtt accattcttt tgaatgcggc tccatagatc      300
```

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ccctgacagg ctcccactat acctgtcgcc gaagtcccag actcctcacc aatggctact    360

atatttggac tgaagacagc ttcctgtgcg acaaagatgg caacataact ctgaacccat    420

cccagaccag cgttatgtat aaggagaact tagttagtac ctccaaatct tggctgcatg    480

gaagtatctt tggtgacatc aactcttctc caagtgaaga caactggttg aaggggacca    540

ggaggttgga cacagaccat tgcaatggaa atgcagatga tttagactgt tcttctctga    600

ctgatgactg ggagtcaggg aagatgaatg cagagtctgt gatcacctcc tcttccagcc    660

acatcatatc tcagcctcct ggaggaaact cccatagctt gtctcttcag tcccagttga    720

cagcttctga acgtttccaa gagaatagtt cggatcattc agaaaccagg ttgttgcaag    780

aggtcttctt tcaggcaatc ctgcttgctg tgtgcttaat cacttctgca tgtgcaagat    840

ggtttatggg agaaatatta gccagtgtct tcacatgctc attgatgata actgtagctt    900

atgtgaaatc attgtttctc agccttgcca gctatttcaa aaccactgcc tgtgctcggt    960

ttgtcaaaat ttgacaacca tttaggaatg ccttcgatga atgtcctcca tctgaatatc   1020

tggaaattgt ccaacttgca gtctacttgg aatcaagtgt tttattggaa gggagtaagc   1080

gagtaatgga gaaaaagcca ttttagtttg actatgtgat tttaaaatga tctcagtttt   1140

tccatcaaaa ttataatatg ctcatgaaaa taatattaat ttgccttccc tttgcaaaca   1200

ccggcagttg aaaggaaaag gacggggaat gtgatggaaa agagaccgcc tggaataaat   1260

gtccccctat gattctttaa ggcagtggtt ctcgagcttg aattttcatt aggaaattct   1320

gtgaggagct tgtaaccaga tttctgggtc tgccacatgc acctatctct tgctgaattg   1380

ctttaataga ataatgagag caagtttgtc taactaatac caacctgaca acttgaataa   1440

caataaatgc aatttgtaca taaaatataa tgctgcaaaa gtttgtcatt cacctcagtg   1500

gagtgacttg atattaggtg gtaaccgtag atgatggtta atatgaaaat ggacaggaaa   1560

gaagcatttt ctgaaagtta tattcttttg aaccacgttc taaaccaagt ttttaatctt   1620

cttggggctc gtaattacct ttcactttaa tgtcacttaa agatataaca cagaaaaatg   1680

ccttgagggc aaaatatagg caaaacacca atgcgctttc aaatgcatga aaatggtgca   1740

gttgtaccct tgagccttga ctcaagggct gtagatgttc cctttccacc ccccacactt   1800

ggtgcgtgtt cacaaagcaa atatggcctg taattcaaat ttgttctatg tgatactctc   1860

tgagtaaaaa ctcatacatg cagaaaattg tctttgctcg aaatgataat gccaaaatat   1920

aactttatat ataatttgca tttagtacat ttttggttaa aaaataaact aataaataag   1980

tgaagtcatc agc                                                       1993
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<210> 2895

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<211>  521
<212>  DNA
<213>  Homo sapiens

<400>  2895
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ttttattaca gaaaatacat tcttcaagag gaaaatgtta aggccatagc agctttcacc    180

ttagctatct aagcttgtat taggtcatca ttaaatagta tctgtatcat tcttatgtgt    240

tccgtaagtt atgccacaaa taccagacca agtacactca gtctagaaac aaaaaagtgg    300

gaaataaagg ttaaaacatt ctaataggtg taatgggctg atagatgact ttatattaca    360

aagctactta agacaattct acttttctag aatacaacgc attaatataa acatttgaaa    420

ttcagaagat ttggcctgtg gatgctttgt ttctcaatgc aattcttgtt aatatgttag    480

taagtaataa tttattaata ccaataataa aaaattaaca t                        521


<210>  2896
<211>  1679
<212>  DNA
<213>  Homo sapiens

<400>  2896
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caccgcatct ggagaaccag cggttaccat ggaggggatc agtatataca cttcagataa    120

ctacaccgag gaaatgggct caggggacta tgactccatg aaggaaccct gtttccgtga    180

agaaaatgct aatttcaata aaatcttcct gcccaccatc tactccatca tcttcttaac    240

tggcattgtg ggcaatggat tggtcatcct ggtcatgggt taccagaaga aactgagaag    300

catgacggac aagtacaggc tgcacctgtc agtggccgac ctcctctttg tcatcacgct    360

tcccttctgg gcagttgatg ccgtggcaaa ctggtacttt gggaacttcc tatgcaaggc    420

agtccatgtc atctacacag tcaacctcta cagcagtgtc ctcatcctgg ccttcatcag    480

tctggaccgc tacctggcca tcgtccacgc caccaacagt cagaggccaa ggaagctgtt    540

ggctgaaaag gtggtctatg ttggcgtctg gatccctgcc ctcctgctga ctattcccga    600

cttcatcttt gccaacgtca gtgaggcaga tgacagatat atctgtgacc gcttctaccc    660

caatgacttg tgggtggttg tgttccagtt tcagcacatc atggttggcc ttatcctgcc    720

tggtattgtc atcctgtcct gctattgcat tatcatctcc aagctgtcac actccaaggg    780

ccaccagaag cgcaaggccc tcaagaccac agtcatcctc atcctggctt tcttcgcctg    840

ttggctgcct tactacattg ggatcagcat cgactccttc atcctcctgg aaatcatcaa    900

gcaagggtgt gagtttgaga acactgtgca caagtggatt tccatcaccg aggccctagc    960
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tttcttccac tgttgtctga accccatcct ctatgctttc cttggagcca aatttaaaac        1020

ctctgcccag cacgcactca cctctgtgag cagagggtcc agcctcaaga tcctctccaa        1080

aggaaagcga ggtggacatt catctgtttc cactgagtct gagtcttcaa gttttcactc        1140

cagctaacac agatgtaaaa gactttttt tatacgataa ataacttttt tttaagttac         1200

acattttttca gatataaaag actgaccaat attgtacagt ttttattgct tgttggattt      1260

ttgtcttgtg tttctttagt ttttgtgaag tttaattgac ttatttatat aaattttttt       1320

tgtttcatat tgatgtgtgt ctaggcagga cctgtggcca agttcttagt tgctgtatgt       1380

ctcgtggtag gactgtagaa aagggaactg aacattccag agcgtgtagt gaatcacgta       1440

aagctagaaa tgatccccag ctgtttatgc atagataatc tctccattcc cgtggaacgt       1500

ttttcctgtt cttaagacgt gattttgctg tagaagatgg cacttataac caaagcccaa       1560

agtggtatag aaatgctggt ttttcagttt tcaggagtgg gttgatttca gcacctacag       1620

tgtacagtct tgtattaagt tgttaataaa agtacatgtt aaacttactt agtgttatg        1679
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<210>    2897
<211>    450
<212>    DNA
<213>    Homo sapiens

<400>    2897
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ctgcaggaaa tgaagtgatt cagaactcac caattatgaa ctaaccttca atgccagagg        120

ctttaacagt ttctaataaa aattcagttc agatctcaag ttcagataag tctgaaaaaa        180

cacttcaagg tcatctgaac gaacatattc taccagtact ttatataatt gtatttacct        240

gttcctaaaa ctttccgtga aagaaatgtt gaattttctt cagaaatagt tttgagcaaa        300

atgtcaaaac aattctccca tgctcagtgt acttttgact atactctgaa aatatttctt        360

cttgttttcc tgcacttacc tgttagtgtg ctcacactcc tgtattatgg aacatgttca       420

gtaactcata cacatgtaac acagaagtct                                        450
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<210>    2898
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<212>    DNA
<213>    Homo sapiens

<400>    2898
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tccaagggtt ttctcatcca tgatctcatt tgatccttgc agcagtccta tgaggaaggc        120

agcacataca tcattagctc cctttttgcca aagaggaaac aaaaaacagg tgaaagggac       180
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ttgtctaagg gcacccagct ctaagggaca gagcaaagta acaggtcatt tctttttttc   240

atttattttt agagacagag   260

<210> 2899
<211> 452
<212> DNA
<213> Homo sapiens

<400> 2899
tttttttttt tttttttttt tttttttttt tttttttttt tttggaaatt ggaaagggca   60

aattaattaa gttttttaaa gccatcaagt tacaaagggc tattaggggt cttaaaaaga   120

caaagagtat ccaataaaac aaaaagcaat tccagatggt tttaggtgga acaattttgg   180

gccagttata tctataggcc attcctaatt tacttagcaa actttatccc ggggattggc   240

aaattaaaaa aaaggaagaa ccaacctata ttttcttttc ggttttttgg aaacagagcc   300

tccactctgt catccaggct ggagtacagg gggggatct cagctcaaca taccctcaac   360

ctttggggtt caaggaatct cgggcctaac cctcccaagc agttgggact acaggcatgc   420

accaccgggc tcggccaatt ttttgcattt tt   452

<210> 2900
<211> 511
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (500)..(500)
<223> n is a, c, g, t or u

<400> 2900
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gatgttttaa cagagtggac aggtaataaa cacgttcaac aaaggcagat gttcttggag   120

gttaaatccc actaatcaac acgattaact ttaagggtcc tgagactttc aatagcatgt   180

acctcatgga ctaaaaaga ggaagagttt atgcttcaca attaatctcc agaacttgac   240

acatgtaatt cttatcacca aggctttaga ttgaaaagta atagaaaaca acagtaactg   300

ttctggtaca gtctagcatt tccaatgtgc ttcttttat tttaatgaaa aaaaaagata   360

cattatatca aacaaaactg ttgatggatc cacatctttg caggctcttt gcggaatggc   420

tcaccaaata cacatttcca tctttagatc attatactgc ttaaacagca agatatgcta   480

aagagatatg aatatgattn tgacctacca t   511

<210> 2901
<211> 541

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<212>  DNA
<213>  Homo sapiens

<400>  2901
tttttttttt  tttttttcct  gacgtataca  gatcatcctg  gacagtttat  ttctctaatt      60

ctgttaatca  aagcagagat  cagaacggat  taactgtggc  aacgtcgtat  caggagcaca     120

aagagaagcc  tgcctctttc  agtttggtct  tttctccagc  aaaacagaaa  tgcaatttag     180

tcaaacacat  acagaggccc  cactgtactg  cctcactgat  ggagggaaat  acttgggtgc     240

aatcacacac  agtgttagtg  attggcaact  gtccagtgct  atttcgctaa  aactggtaaa     300

aacagtttcc  ttgggcaagc  agctgattgg  ctacttcata  ctgtgctgag  ttgggctcag     360

cttgtctgtc  tctgggaggc  cctaaggggc  tcctcttttt  cagctaggga  taaggggaga     420

ctgtcaacca  gtatcttagc  gtgaactgtc  aatcgctgag  cccctgccaa  ggactctctg     480

gaagtccctc  aggtatgctg  aaaatacctt  atactgaaaa  ggtagctctc  gctgcatcca     540

c                                                                          541


<210>  2902
<211>  646
<212>  DNA
<213>  Homo sapiens

<400>  2902
gaattaaaaa  taatactttt  attgctggtt  atgctttctt  aaaagtaaaa  attattcttg      60

attgatgtga  cttgccagaa  tgtttgaaac  accagtgacc  aagggtcact  atatctgccc     120

ccaaacaatt  ccaccatgtt  tacttatata  gcactcacca  aaccagaaga  gaggctggga     180

tattctcagg  ccactgcact  gaacatcaat  atgaaagaac  catgaatgat  gcgacaactg     240

agttgatttt  ctacctcctc  tgcccaccat  gactttgcac  cccaaattct  ttcagtgtct     300

tttcaaggta  caaccctcct  tctgggcaca  ggttggctgg  gtcacctcaa  ggtatgttcc     360

ttcattctgc  agtgatttcc  tgcctctgct  caattaagga  agttgagaat  acagataact     420

caggatcatg  tttaattatg  taaaaaagct  ctaaagtcag  gtaatggttt  tcatgtgctt     480

ctcttgagca  gtctgaggag  agaatagaaa  cagaaacccc  ttggggcctg  agtagacgca     540

gctggccatg  cacaggcaga  ggctcttggt  cagtgcagga  agcagagtca  cagccatcgc     600

cttggggtgg  ggatgaaatg  agatgacctg  ttggctgtat  gacagc                    646


<210>  2903
<211>  557
<212>  DNA
<213>  Homo sapiens

<400>  2903
atctcaaagg  caattgagtg  ggtcttctgg  ccagaccta  tttaatttac  gaaacatagt      60
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accttgcaga gaataggcat tgaaatatta tttaaacaat caaaccaaag atgttcttct   120

atcttcagct gtcagtgatc taatgccctc atctctctta tcctcaggac ccagaatggt   180

atattccaca taaaagatgc tttgtttatc aaatgaatca aaaagcacgc ctgaggcatt   240

tatttttact cctttacttc tgtaggccag gtcaaggtgg gtctaattca cttttatcat   300

cagcacttaa gaaactggat ggaagaccac aacaccttgt tttttgcaaa aattttccat   360

ctcctcaatc aggccaggaa gcatgtatct tctggacagg actttatctc tctactcagc   420

ttagtacact gccttatatt agtccatttg tcccatgttt tcatcactga ataaacttgt   480

taaatgactt ttggtctgga tctcacacct atattacttc atttccttct gtgagcactc   540

tataatgata acatcat   557

<210>   2904
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<212>   DNA
<213>   Homo sapiens

<220>
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<222>   (239)..(239)
<223>   n is a, c, g, t or u

<400>   2904
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tgcgcgtggg tcgcgaggtg acaggagccg gccctcgtcc ttaatggagc ggccagagct   120

gggtggggc ggcccgggag ctcggggttc ccggcactac ctgaatgcag cccgaagcca   180

agttgtgcac gcgtttgtcc tataaaagcg aagtgagtgg attcccattt tggaatccnc   240

ggtgtctcca acctcgagtt ggagaaccat gttgagtcag ttccccggaa ccttacaaat   300

ggactccact tcccccgttc ccattctacc gttttttta aaaatgatt tttttgagtg   360

gcggttccag gattagtcaa atagcttctc ccgagaatgc tctttaaaag attgtcagac   420

accttgggt taagtctcag tttttgcatg ggcccgaatt gcagtcctat gaatttctga   480

tttattca   488

<210>   2905
<211>   696
<212>   DNA
<213>   Homo sapiens

<400>   2905
ttcccccccc cccccccccc ccccgcccga gcacaggaca cagctgggtt ctgaagcttc   60

tgagttctgc agcctcacct ctgagaaaac ctcttttcca ccaataccat gaagctctgc   120

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gtgactgtcc tgtctctcct catgctagta gctgccttct gctctccagc gctctcagca      180

ccaatgggct cagaccctcc caccgcctgc tgcttttctt acaccgcgag gaagcttcct      240

cgcaactttg tggtagatta ctatgagacc agcagcctct gctcccagcc agctgtggta      300

ttccaaacca aaagaagcaa gcaagtctgt gctgatccca gtgaatcctg ggtccaggag      360

tacgtgtatg acctggaact gaactgagct gctcagagac aggaagtctt cagggaaggt      420

cacctgagcc cggatgcttc tccatgagac acatctcctc catactcagg actcctctcc      480

gcagttcctg tcccttctct taatttaatc ttttttatgt gccgtgttat tgtattaggt      540

gtcatttcca ttatttatat tagtttagcc aaaggataag tgtcctatgg ggatggtcca      600

ctgtcactgt ttctctgctg ttgcaaatac atggataaca catttgattc tgtgtgtttt      660

ccataataaa actttaaaat aaaatgcaga cagtta                                696


<210>   2906
<211>   347
<212>   DNA
<213>   Homo sapiens

<400>   2906
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gatggattga gtacaagttc cttcatcgta agtggaagca gaagttccta actctttag       120

tatttgtcat ctgaactact tttctatctt ttacctcctc aatagataa gttattagaa       180

ggcaaatatt gcttcttgat ttttgtttt ccgtctatct aagcttgaat tttatgtgca       240

cgtaaggtag atgtgaaatt catgggcatc aaatatgggt gggtaaaata taattttgtt       300

ttctataatt aaaattattc tatatctaga tccttgttgc attgggg                   347


<210>   2907
<211>   549
<212>   DNA
<213>   Homo sapiens

<400>   2907
ttttttgttt tcccttgact ttatttatct tcataagtca caaaatgtga gtgcagagat       60

aaatgtctgt gtgcatgtgc cctgagcaca cagggtggca taactcggca cactcataat      120

gacacagccg ttcacccagc cacagatagt gacagggcac acatggcgac acccacatgt      180

acggagataa atctccccca ccatgacatg ggtagacaga aaacacgccg cagtatactc      240

tagtatgttt acacaaacag ggagacaggc ccgtgcaatg catgtcacca acacccacac      300

tcagagtgac atctgctgga ggtgctcaga cacagccacc caccgtgaca tgccgagact      360

cacatatgtc acatgacaca ggcatgcatg ccacattcac tgtgactctc agtcctattc      420

attcatcacc tttctgggag atacactgaa atgtccaccc tttgcaaaat gcacacacac      480
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gcgcacgcac  acacgcacac  acacgaacac  acgcgcacac  acgcacacac  acgcacgcag        540

gtgtacaca                                                                      549
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<210>   2908
<211>   400
<212>   DNA
<213>   Homo sapiens

<400>   2908
ctttctttttc  tcttctttct  tcacgcaggt  acaaaggaca  gagtatattt  cttcactcag         60

gttcagagga  cagaataatg  aatcttctttt  ctttccttct  ttcttccttc  cttccttctt        120

tccttccttc  cttcccttt  cctatggaca  gctgagaatc  attttctaac  tttatcaaat          180

atgctccctc  ctcttaagat  agcctgccct  ggctgcttcc  tatgtctctt  gcagtctgac         240

caggcactgt  agggaagagg  cccaaatgca  cccacctggc  ccagatatcc  agaggccaag         300

gccacggtcc  tgcaccacag  cgtgagagtt  cttctttgca  gtgcctacaa  acctatgctt         360

gcccccaaac  tcgctcaggg  gtaacggggt  tggggaaaga                                 400
```

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<210>   2909
<211>   547
<212>   DNA
<213>   Homo sapiens

<400>   2909
ttttttttt  ttttggtttt  gaacctttaa  taaaagtaaa  aaatgaatgc  aaaaagaaca          60

caatgttgaa  aacttagtat  gaatgtgaac  ctcactagat  gttcaaatct  ggtagagtgc        120

aaattttgtt  catactattt  tacatttta  caaactcaaa  tcactttggt  tcatatattt         180

tctataaact  attggcaaaa  aaatcctcaa  atttacattc  ttttggctac  attatttcta        240

acagatatag  atttacttcc  ggtttcggag  agaaagactt  attgtgtgtg  cgtgatcaag        300

tctgttttaa  agattcactc  gctgctttca  tctaataact  tctggttttt  cataaaatgc        360

tgacatcttc  attggaaatt  ttttcatgt  aactgttttc  attttcagaa  aatatataag         420

ggggtcattc  caaagttcag  aatgatccta  ttttttaaa  aaacaaaatt  cctgtaaaac         480

aaattaactc  caggaactta  aaatttactc  caagacattt  ccctcaaaac  aaagcaaaaa        540

accccag                                                                       547
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<210>   2910
<211>   549
<212>   DNA
<213>   Homo sapiens

<400>   2910
attttggaaa  atgttaaaat  ttattaataa  tagttaacat  cacatagtta  attaaactag          60
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ttatgtattg tacataatga caacatcttc actagactga gtgctcaagg atttgagatg   120

attcgctatt catcacaccc cgaagattga gatccactgt atttacacaa agcaaagcca   180

tgtcagcaag ggactgtcaa cctgattctg agaacataaa cattcaaaat ttattttcca   240

gtgttccttt ttggaaacca acaacacatc tttaatacct acacacacac acatctctac   300

ctttaaaaaa aaaaaaaaag tgtaacttca cagatagtac ctaatcttca agcttaaaat   360

ttaagttaaa attaatctct attttgtggg caccctttag tgaactaaaa tctacatgaa   420

acctttggc ttttgtgtag caggaaatac ccacgttttg ggtcaattag tgcagatggg   480

agcagcagag gagctacacc agacagcaaa gcaagactag agcaaacgag aaggaccagc   540

ccctagccc                                                          549
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<210>  2911
<211>  408
<212>  DNA
<213>  Homo sapiens

<400>  2911
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ttcgcggcgt ggcgcccggt ggtccccaag gggagggaag ggggaggcgg ggcgaggaca   120

gtgaccggag tctcctcagc ggtggctttt ctgcttggca gcctcagcgg ctggcgccaa   180

aaccggactc cgcccacttc ctcgcccctg cggtgcgagg gtgtggaatc ctccagacgc   240

tgggggaggg ggagttggga gcttaaaaac tagtacccct ttgggaccac tttcagcagc   300

gaactctcct gtacaccagg ggtcagttcc acagacgcgg gccaggggtg ggtcattgcg   360

gcgtgaacaa taatttgact agaagttgat tcgggtgttt ccggaagg               408
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<210>  2912
<211>  525
<212>  DNA
<213>  Homo sapiens

<400>  2912
taatctcaaa ggcaattgag tgggtcttct gggccagacc tatttaattt acgaaacata    60

gtaccttgca gagaataggc attgaaatat tatttaaaca atcaaaccaa agatgttctt   120

ctatcttcag ctgtcagtga tctaatgccc tcatctctct tatcctcagg acccagaatg   180

gtatattcca cataaaagat gctttgttta tcaaatgaat caaaaagcac gcctgaggca   240

tttattttta ctcctttact tctgtaggcc aggtcaaggt gggtctaatt cacttttatc   300

atcagcactt aagaaactgg atggaagacc acaacacctt gttttttgca aaaattttcc   360

atctcctcaa tcaggccagg aagcatgtat cttctggaca ggactttatc tctctactca   420
```

```
gcttagtaca ctgccttata ttagtccatt tgtcccatgt tttcatcact gaataaactt      480

gttaaatgac ttttggtctg gatctcacac ctatattact tcatt                       525
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<210>  2913
<211>  1085
<212>  DNA
<213>  Homo sapiens

<400>  2913
ttatggatcc agaatgtata ttcattcagc atattaaaga tatgtgcttt gacattcatt       60

tgaattggag attcaagcct attgttatct tatgaacact tcagcaaaca ggtctgccat      120

tcttaaaaat ataatgcttt gttggacaaa agggacaagc cacgtcccct ggtcctctcc      180

tctattcgcc tgtgaactcc atccacacgt aaaggacctc tgggtctgac tgtcccctcc      240

acaggcatgg tgctgggaaa aggaaacagg catatctggc ttttcagatt ttaaaccgga      300

aactctcaca gtcacaaatc caccatgaga cttgggagat tggatgagct gtctcccaaa      360

ccctaacacc ttccaccttc tcaaaatgaa ggctgccctt tcactgggag gttctgaatg      420

cgggattggt gctgactcag ctgggcaca aaggagaaca ggaggacatg gaaaatccga      480

caattcgaag tacaaatatt tcaaacacat gtgaaaacca tttggaaaga agaaagagg      540

tatctggaat gatttcatga cagaaatgaa aaaagataaa tttagttcta atcttcctgg      600

caacaaagcc ccagaggaga aggtttcatt gtctgaagat aaaaacacac ccgtttgcct      660

ggatatgaac acagtattcc tgcaccaaat tctagaaaga atatactttc ttctaacaaa      720

gccaagagtt tttcttgtac tcattacagg gggctttttaa tcctaacata tttttttaact     780

ccttatgaaa atgcataaaa gttaaaaaga tatttcacga tagaatcaag cctatgaaat      840

cgtcaaatct attaactcct taacgaaccg aattaaggac caaaaacaaa ccttgttttt      900

tcacaaaggt tggatgttgt aaacgtccga aagtgtcctt ttatacgaaa gacagtaatc      960

tggggaaata tttactggaa tgacacaggt ctttggggga aggaactatt taccggataa     1020

atgggaaaag aaatgttagc gagactatgg tataacacgg ctaggagat aacaaataaa     1080

tatta                                                                  1085
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<210>  2914
<211>  2610
<212>  DNA
<213>  Homo sapiens

<400>  2914
ccgctggttc cgtaacaaca tcccgttggc ttccctcagg cggcgggacc agtgcagccg       60

ccgcctccca ggatcgtccg ccggtcaggg cccttgccct ccccggcaca ggccaccatg      120

gccaccaacc cacagccgca gccgcctcct ccggcgccgc cgcctccccc gccgcagccg      180
```

```
cagccgcagc caccgccgcc gccgccgggc cccggggctg gccccggcgc gggcggggcg      240

ggcggcgcgg gtgcgggcgc cggggacccg cagctcgtgg ccatgatcgt gaaccacctc      300

aagagccagg ggctcttcga ccagttccgc agagactgcc tggccgacgt ggacaccaag      360

cctgcgtatc agaatctgag acagcgtgtt gacaactttg ttgcaaatca cttggcaact      420

cacacatgga gtccgcatct caataagaac cagctaagaa acaacattag acaacaagtc      480

ctcaaatcag gaatgttgga gtctggtatt gaccgaatta tttctcaggt tgtggaccca      540

aagatcaacc acacattcag acctcaggta gagaaagctg tgcatgagtt tttggccacg      600

ctaaatcaca agaggaagg aagtggcaac acagctcccg atgatgagaa accagacact      660

tcccttatta cacaaggtgt tcctactcct gggcccagtg ctaatgtagc caatgatgcc      720

atgtcgatat tggaaaccat aacttctctt aaccaagaag ccagtgctgc tagggcttca      780

acagaaacat caaatgccaa gaccagtgag agagcgtcaa aaaaacttcc atctcagcca      840

accactgata ctagtactga caaagaaaga acttcagagg acatggctga taaagaaaaa      900

tctacagctg actctggagg tgaaggactg gaaacagccc caaagtctga gagttcagc      960

gacctcccct gtccagtcga agaaattaaa aattacacaa aagagcataa taatttaatt     1020

ctgctaaata aggatgttca acaggaaagc agtgagcaaa aaaataaatc aacagacaaa     1080

ggtgaaaaga agccagacag caatgagaaa ggagaagaa agaaagaaaa gaaggaaaag     1140

actgaaaaga aatttgatca ctcaaaaaag agtgaagata cacagaaagt taaagatgaa     1200

aaacaagcaa aggaaaaaga agtagagagt ttaaaacttc cttcagaaaa gaacagtaat     1260

aaagctaaaa ctgttgaagg gacaaaagaa gatttctctt tgatagattc tgatgtggat     1320

ggacttacag acatcacagt tagctctgtt cataccagtg acctttcatc ttttgaagaa     1380

gatactgagg aggaagttgt aacgtctgat agcatggaag aaggagagat tacgtcagat     1440

gatgaagaga agaacaaaca gaataaaaca aaaactcaaa ctagtgattc tagtgaagga     1500

aaaacaaaaa gtgtacggca tgcgtatgtc cacaaaccat atctttactc aaaatactat     1560

agtgattctg atgatgagct tactgtagaa caacgacgac agtccattgg tatttttgtgg     1620

ttttaggcca aagaaaaga agagaggctt ttaagaaggc aaatcaatag agaaaaactt     1680

gaagaaaac gaaacagaa agcagaaaag acaaagtctt caaaaaccaa gggtcaaggc     1740

aggagtagtg tggacttaga agaatcatca acaaagagtt tggaacctaa agccgccaga     1800

attaaagaag tccttaaaga acggaaagtt ttagaaaaaa aagtagcctt aagcaaaaag     1860

agaaaaaaag attcaaggaa tgttgaagag aactccaaaa agaaacagca atatgaagaa     1920

gattccaaag aaacccttaa aacaagtgag cattgtgaaa aggaaaaaat ttcttcttca     1980
```

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aaggagctga agcatgttca tgcaaaaagt gaaccaagta aacctgcccg gagactttca    2040

gagtctttgc atgtagttga cgaaaacaaa aatgaatcca aattagaaag agaacataaa    2100

agacggacat ctacccctgt tatcatggag ggggtacagg aagagactga cacaagagat    2160

gtaaaaaggc aagtagaacg ctcagaaatt tgcaccgaag agccccagaa acagaaaagc    2220

acacttaaaa acgaaagca  tctaaagaaa gatgattctg aaacaccaca tttgaaaagc    2280

ctacttaaga aagaggtgaa atcctccaag gagaagcctg aaagagagaa aactccatcg    2340

gaagacaaat tgtctgtgaa acataaatat aaaggtgatt gtatgcataa aacaggtgat    2400

gagactgagc ttcactcttc tgagaaaggt ttaaaagtag aggaaaatat tcaaaagcaa    2460

agtcaacaaa caaagctttc ttcagatgat aaaaccgaac gaaaaagtaa acataggaat    2520

gaaaggaaat tatcagtatt aggcaaagat ggaaagccag tttctgaata tattataaaa    2580

acagatgaga atgttcgtaa agaaaaaaaa                                      2610
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<210>   2915
<211>   279
<212>   DNA
<213>   Homo sapiens


<220>
<221>   misc_feature
<222>   (86)..(118)
<223>   n is a, c, g, t or u

<400>   2915
gcaggtacta gcttcaactc tctaaataaa tttcaaggct ttgtgaaaat aacctctctt     60

ctcattcaag ggtatgttta ctggtnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnac    120

tgtaaaagga tagtgtttgc atctagagga ctagagacat gcctgcacat ccctcacctt    180

caaaggtgaa ctctacacag gattcttgtc ctagtcattg tggcaacccc atctgacacc    240

ttgtgtagta cctcggccgc gaccacgcta atcactagt                           279
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<210>   2916
<211>   1082
<212>   DNA
<213>   Homo sapiens

<400>   2916
gatcccagac ctcggcttgc agtagtgtta gactgaagat aaagtaagtg ctgtttgggc     60

taacaggatc tcctcttgca gtctgcagcc caggacgctg attccagcag cgccttaccg    120

cgcagcccga agattcacta tggtgaaaat cgccttcaat acccctaccg ccgtgcaaaa    180

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gaccggcaag gagctccgag ttgccaccca ggaaaaagag ggctcctctg ggagatgtat    300
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gcttactctc ttaggccttt cattcatctt ggcaggactt attgttggtg gagcctgcat      360

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tgaggatcct gcaaattccc ttcgtggagg agagcctaac ttcctgcctg tgactgagga      480

ggctgacatt cgtgaggatg acaacattgc aatcattgat gtgcctgtcc ccagtttctc      540

tgatagtgac cctgcagcaa ttattcatga ctttgaaaag ggaatgactg cttacctgga      600

cttgttgctg gggaactgct atctgatgcc cctcaatact tctattgtta tgcctccaaa      660

aaatctggta gagctctttg caaactggc gagtggcaga tatctgcctc aaacttatgt       720

ggttcgagaa gacctagttg ctgtggagga aattcgtgat gttagtaacc ttggcatctt      780

tatttaccaa ctttgcaata acagaaagtc cttccgcctt cgtcgcagag acctcttgct      840

gggtttcaac aaacgtgcca ttgataaatg ctggaagatt agacacttcc ccaacgaatt      900

tattgttgag accaagatct gtcaagagta agaggcaaca gatagagtgt ccttggtaat      960

aagaagtcag agatttacaa tatgacttta acattaaggt ttatgggata ctcaagatat     1020

ttactcatgc atttactcta ttgcttatgc cgtaaaaaaa aaaaaaaaaa aaaaaaaaaa     1080

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<212>   DNA
<213>   Homo sapiens


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<223>   n is a, c, g, t or u

<220>
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atttgttatt atttaataga agacacattc tctggtccat ttatatcctg tatacaaatt      180

aacttatttt gattgtatcc atgcaatcta agacaataaa aatagaagaa aaaacagcca      240

cataaacagc aaagtgttat tactgattta attgaattga tttgacattt tcagtccact      300
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gatatatttc ctgagataaa agttgccctt agtattcatg aatctgtagt tcattcttag      360

taattttaac atgaaaaatt gatgtgttta aattttcact ttaatattca tgttttctat      420

aaaatattgt aaaattctaa gatattatgg ttatacatat ttattactat tattacatat      480

taatgtgaat tttgagaaac tttcctttgc atgattttct caaattacaa aatatattat      540

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ggaangangg                                                             610
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<212>  DNA
<213>  Homo sapiens
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caccgcatct ggagaaccag cggttaccat ggaggggatc agtatataca cttcagataa      120

ctacaccgag gaaatgggct caggggacta tgactccatg aaggaaccct gtttccgtga      180

agaaaatgct aatttcaata aaatcttcct gcccaccatc tactccatca tcttcttaac      240

tggcattgtg ggcaatggat tggtcatcct ggtcatgggt taccagaaga aactgagaag      300

catgacggac aagtacaggc tgcacctgtc agtggccgac ctcctctttg tcatcacgct      360

tcccttctgg gcagttgatg ccgtggcaaa ctggtacttt gggaacttcc tatgcaaggc      420

agtccatgtc atctacacag tcaacctcta cagcagtgtc ctcatcctgg ccttcatcag      480

tctggaccgc tacctggcca tcgtccacgc caccaacagt cagaggccaa ggaagctgtt      540

ggctgaaaag gtggtctatg ttggcgtctg gatccctgcc ctcctgctga ctattcccga      600

cttcatcttt gccaacgtca gtgaggcaga tgacagatat atctgtgacc gcttctaccc      660

caatgacttg tgggtggttg tgttccagtt tcagcacatc atggttggcc ttatcctgcc      720

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ccaccagaag cgcaaggccc tcaagaccac agtcatcctc atcctggctt tcttcgcctg      840

ttggctgcct tactacattg ggatcagcat cgactccttc atcctcctgg aaatcatcaa      900

gcaagggtgt gagtttgaga cactgtgca caagtggatt tccatcaccg aggccctagc      960

tttcttccac tgttgtctga accccatcct ctatgctttc cttggagcca aatttaaaac     1020

ctctgcccag cacgcactca cctctgtgag cagagggtcc agcctcaaga tcctctccaa     1080

aggaaagcga ggtggacatt catctgtttc cactgagtct gagtcttcaa gttttcactc     1140

cagctaacac agatgtaaaa gacttttttt tatacgataa ataacttttt tttaagttac     1200

acatttttca gatataaaag actgaccaat attgtacagt ttttattgct tgttggattt     1260
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ttgtcttgtg  tttctttagt  ttttgtgaag  tttaattgac  ttatttatat  aaattttttt     1320

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ctcgtggtag  gactgtagaa  aagggaactg  aacattccag  agcgtgtagt  gaatcacgta     1440

aagctagaaa  tgatccccag  ctgtttatgc  atagataatc  tctccattcc  cgtggaacgt     1500

ttttcctgtt  cttaagacgt  gattttgctg  tagaagatgg  cacttataac  caaagcccaa     1560

agtggtatag  aaatgctggt  ttttcagttt  tcaggagtgg  gttgatttca  gcacctacag     1620

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<212>  DNA
<213>  Homo sapiens

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aatgtccgca  tcgcaaccac  cgccctggcc  atctaccatg  tgatcatgag  cgtcttgttg      180

ttcatcgagc  actcagtaga  ggtggcccat  ggcaaggcgt  cctgcaagct  ctcccagatg      240

ggctacctca  ggatcgctga  cctgatctcc  agcttcctgc  tcatcaccat  gctcttcatc      300

atcagcctga  gcctactgat  cggcgtagtc  aagaaccggg  agaagtacct  gctgcccttc      360

ctgtccctgc  aaatcatgga  ctatctcctg  tgcctgctca  ccctgctggg  ctcctacatt      420

gagctgcccg  cctacctcaa  gttggcctcc  cggagccgtg  ctagctcctc  caagttcccc      480

ctgatgacgc  tgcagctgct  ggacttctgc  ctgagcatcc  tgaccctctg  cagctcctac      540

atggaagtgc  ccacctatct  caacttcaag  tccatgaacc  acatgaatta  cctccccagc      600

caggaggata  tgcctcataa  ccagttcatc  aagatgatga  tcatcttttc  catcgccttc      660

atcactgtcc  ttatcttcaa  ggtctacatg  ttcaagtgcg  tgtggcggtg  ctacagattg      720

atcaagtgca  tgaactcggt  ggaggagaag  agaaactcca  agatgctcca  gaaggtggtc      780

ctgccgtcct  acgaggaagc  cctgtctttg  ccatcgaaga  ccccagaggg  gggcccagca      840

ccacccccat  actcagaggt  gtgaccctcg  ccaggcccca  gccccagtgc  tgggaggggt      900

ggagctgcct  cataatctgc  ttttttgctt  tggtggcccc  tgtggcctgg  gtgggccctc      960

ccgcccctcc  ctggcaggac  aatctgcttg  tgtctccctc  gctggcctgc  tcctcctgca     1020

gggcctgtga  gctgctcaca  actgggtcaa  cgctttaggc  tgagtcactc  ctcgggtctc     1080

tccataattc  agcccaacaa  tgcttggttt  atttcaatca  gctctgacac  ttgtttagac     1140

gattggccat  tctaaagttg  gtgagtttgt  caagcaacta  tcgacttgat  cagttcagcc     1200
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                                          1261

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aagcaactga caaatcaaaa acccacttgt cagttcagta aaataatttg gtcaaacaac    1260

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acatgataat caattagcca accatgagtc atttagaata gtgataaata gaatacacag    1440

aatagtgatg aaattcaatt taaaaaatca cgttagcctc caaaccattt aattcaaatg    1500

aacccatcaa ctggatgcca actctggcga atgtaggacc tctgagtggc tgtataattg    1560

ttaattcaaa tgaaattcat ttaaacagtt gacaaactgt cattcaacaa ttagctccag    1620

gaaataacag ttatttcatc ataaaacagt cccttcaaac acacaattgt tctgctgaag    1680

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ccctgtgtgt cggggtcctc cagggagctg acccagaggt ggaggccacg gaggcagggt    2100

ctctggggac tgtcggggggg tacagaggga gaaggctctg caagagctcc ctggcaatac    2160

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<212>  DNA
<213>  Homo sapiens

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gaaccaggtt tgctgtgaac tttcagactg gcttcagtgg aaatgacatt gccttccact    240

tcaaccctcg gtttgaagat ggagggtacg tggtgtgcaa cacgaggcag aacggaagct    300

ggggggcccga ggagaggagg acacacatgc ctttccagaa ggggatgccc tttgacctct    360

gcttcctggt gcagagctca gatttcaagg tgatggtgaa cgggatcctc ttcgtgcagt    420

acttccaccg cgtgcccttc caccgtgtgg acaccatctt cgtcaatggc tctgtgcagc    480

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agacagtcat ccacacagtg cagagcgccc ctggacagat gttctctact cccgccatcc      600

cacctatgat gtaccccac  cccgcctatc cgatgccttt catcaccacc attctgggag      660

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agaatgctgt ggtccgcaac acccagatcg acaactcctg ggggtctgag gagcgaagtc      840

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ctcactgcct caaggtggcc gtggatggtc agcacctgtt tgaatactac catcgcctga      960

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tctcatcatc cccacttccc aggcccagcc tttccaaccc tgcctgggat ctgggcttta     1140

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cttcccactg gcctccacca cctgaccaga gtgttctctt cagaggactg gctcctttcc     1560

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<211>    916
<212>    DNA
<213>    Homo sapiens

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ctgctgctgc tcctactgct ggccactggc ctagcactgg cctggcgccg cctcagccgt      240

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acagacaatg accttgagcg acaggaggat gagcaggaca cagactatga ccacgtcgcg      420

gatggtggcc tgcaggctga ccctggggaa ggcgagcagc aatgtggaga ggcgtccagc      480

ccagagcagg tccccgtgcg ggctgaggaa gccagagaca gtgacacgga gggcgacctg      540
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gtcctcggct cccagggacc agcgagcgca gggggcagtg ctgaggccct gctgagtgac      600

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tcactccccg tgcctctgct tcccaagatg ccatggctgg actggacccc cagcccacat      780

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<211>   1272
<212>   DNA
<213>   Homo sapiens
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tgagctggaa tcctggcttt atatcttacc agctacacaa ccttggagtc ttagaaattt      180

tttctttttca ataagcagtc atccttactt tccctcaaga tgacaaacag ttcgttcttc      240

tgcccagttt ataaagatct ggagccattc acgtatttttt tttatttagt tttccttgtt      300

ggaattattg gaagttgttt tgcaacctgg gcttttatac agaagaatac gaatcacagg      360

tgtgtgagca tctacttaat taatttgctt acagccgatt tcctgcttac tctggcatta      420

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caagtaacag cctgcctcat ctatatcaat atgtatttat caattatctt cttagcattt      540

gtcagcattg accgctgtct tcagctgaca cacagctgca agatctaccg aatacaagaa      600

cccggatttg ccaaaatgat atcaaccgtt gtgtggctaa tggtccttct tataatggtg      660

ccaaatatga tgattcccat caaagacatc aaggaaaagt caaatgtggg ttgtatggag      720

tttaaaaagg aatttggaag aaattggcat ttgctgacaa atttcatatg tgtagcaata      780

tttttaaatt tctcagccat cattttaata tccaattgcc ttgtaattcg acagctctac      840

agaaacaaag ataatgaaaa ttacccaaat gtgaaaaagg ctctcatcaa catacttta       900

gtgaccacgg ctacatcat atgctttgtt ccttaccaca ttgtccgaat cccgtatacc      960

ctcagccaga cagaagtcat aactgattgc tcaaccagga tttcactctt caaagccaaa     1020

gaggctacac tgctcctggc tgtgtcgaac ctgtgctttg atcctatcct gtactatcac     1080

ctctcaaaag cattccgctc aaaggtcact gagacttttg cctcacctaa agagaccaag     1140

gctcagaaag aaaaattaag atgtgaaaat aatgcataaa agacaggatt ttttgtgcta     1200
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aaaagcggcc gc   1272

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<211>   413
<212>   DNA
<213>   Homo sapiens

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cacaaaggga taacttttgt tttcctcatg agtcaacttg aaggataact ttaaaaaatt   120

ggtccatgca gcagagtgag actccgtctc aaaaaaaaaa aaaaaaaaaa aaaaaggtcc   180

atgcagaaga ctatcttttt ccaatttgta taagggaact atgtaagttc actgtagctc   240

tgggtatcct caacccacag atctggcagg cagcttgcag cccatcttca gaggagggcc   300

aagtgtccat tcagactcgg gtattccac actagctgtc tttgagttcc atcaagtaga   360

tagagaactt ctgatccaag ggattttata gagattacaa ccccctcgtg ccg   413

<210>   2924
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<212>   DNA
<213>   Homo sapiens

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acaaccccac cccagagaac gacccagccc tgaatgccaa gggggagaga ctctgcctta   240

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gatggggtgg atggcagaaa ccaaggggggg ccccagctcc tgcgattctc ctcctctctc   360

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<210>   2925
<211>   199
<212>   PRT
<213>   Homo sapiens

<400>   2925

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1   5   10   15

Glu Ser Gly Gln Glu Asn Asp Ala Thr Ser Pro His Phe Ser Thr Arg
        20   25   30

His Glu Gly Ser Phe Gln Val Pro Val Leu Cys Ala Val Met Asn Val
        35   40   45

Val Phe Ile Thr Ile Leu Ile Ile Ala Leu Ile Ala Leu Ser Val Gly
        50   55   60

Gln Tyr Asn Cys Pro Gly Gln Tyr Thr Phe Ser Met Pro Ser Asp Ser
65   70   75   80

His Val Ser Ser Cys Ser Glu Asp Trp Val Gly Tyr Gln Arg Lys Cys
                85   90   95

Tyr Phe Ile Ser Thr Val Lys Arg Ser Trp Thr Ser Ala Gln Asn Ala
        100   105   110

Cys Ser Glu His Gly Ala Thr Leu Ala Val Ile Asp Ser Glu Lys Asp
        115   120   125

Met Asn Phe Leu Lys Arg Tyr Ala Gly Arg Glu Glu His Trp Val Gly
        130   135   140

Leu Lys Lys Glu Pro Gly His Pro Trp Lys Trp Ser Asn Gly Lys Glu
145   150   155   160

Phe Asn Asn Trp Phe Asn Val Thr Gly Ser Asp Lys Cys Val Phe Leu
                165   170   175

Lys Asn Thr Glu Val Ser Ser Met Glu Cys Glu Lys Asn Leu Tyr Trp
                180   185   190

Ile Cys Asn Lys Pro Tyr Lys
        195

<210> 2926
<211> 326
<212> PRT
<213> Homo sapiens

<400> 2926

Met Asp Tyr Ser His Gln Thr Ser Leu Val Pro Cys Gly Gln Asp Lys
1   5   10   15

Tyr Ile Ser Lys Asn Glu Leu Leu Leu His Leu Lys Thr Tyr Asn Leu
        20   25   30

Tyr Tyr Glu Gly Gln Asn Leu Gln Leu Arg His Arg Glu Glu Glu Asp
        35   40   45

Glu Phe Ile Val Glu Gly Leu Leu Asn Ile Ser Trp Gly Leu Arg Arg
    50   55   60

Pro Ile Arg Leu Gln Met Gln Asp Asp Asn Glu Arg Ile Arg Pro Pro
65   70   75   80

Pro Ser Ser Ser Ser Trp His Ser Gly Cys Asn Leu Gly Ala Gln Gly
                85   90   95

Thr Thr Leu Lys Pro Leu Thr Val Pro Lys Val Gln Ile Ser Glu Val
            100   105   110

Asp Ala Pro Pro Glu Gly Asp Gln Met Pro Ser Ser Thr Asp Ser Arg
        115   120   125

Gly Leu Lys Pro Leu Gln Glu Asp Thr Pro Gln Leu Met Arg Thr Arg
    130   135   140

Ser Asp Val Gly Val Arg Arg Arg Gly Asn Val Arg Thr Pro Ser Asp
145   150   155   160

Gln Arg Arg Ile Arg Arg His Arg Phe Ser Ile Asn Gly His Phe Tyr
            165   170   175

Asn His Lys Thr Ser Val Phe Thr Pro Ala Tyr Gly Ser Val Thr Asn
            180   185   190

Val Arg Ile Asn Ser Thr Met Thr Thr Pro Gln Val Leu Lys Leu Leu
    195   200   205

Leu Asn Lys Phe Lys Ile Glu Asn Ser Ala Glu Glu Phe Ala Leu Tyr
    210   215   220

Val Val His Thr Ser Gly Glu Lys Gln Lys Leu Lys Ala Thr Asp Tyr
225   230   235   240

Pro Leu Ile Ala Arg Ile Leu Gln Gly Pro Cys Glu Gln Ile Ser Lys
            245   250   255

Val Phe Leu Met Glu Lys Asp Gln Val Glu Glu Val Thr Tyr Asp Val
        260   265   270

Ala Gln Tyr Ile Lys Phe Glu Met Pro Val Leu Lys Ser Phe Ile Gln
        275   280   285

Lys Leu Gln Glu Glu Glu Asp Arg Glu Val Lys Lys Leu Met Arg Lys
        290   295   300

Tyr Thr Val Leu Arg Leu Met Ile Arg Gln Arg Leu Glu Glu Ile Ala
305   310   315   320

Glu Thr Pro Ala Thr Ile
                325

<210> 2927
<211> 364
<212> PRT
<213> Homo sapiens

<400> 2927

Met Pro Leu Leu Leu Leu Leu Pro Leu Leu Trp Ala Gly Ala Leu Ala
1   5   10   15

Met Asp Pro Asn Phe Trp Leu Gln Val Gln Glu Ser Val Thr Val Gln
        20   25   30

Glu Gly Leu Cys Val Leu Val Pro Cys Thr Phe Phe His Pro Ile Pro
        35   40   45

Tyr Tyr Asp Lys Asn Ser Pro Val His Gly Tyr Trp Phe Arg Glu Gly
        50   55   60

Ala Ile Ile Ser Gly Asp Ser Pro Val Ala Thr Asn Lys Leu Asp Gln
65   70   75   80

Glu Val Gln Glu Glu Thr Gln Gly Arg Phe Arg Leu Leu Gly Asp Pro
                85   90   95

Ser Arg Asn Asn Cys Ser Leu Ser Ile Val Asp Ala Arg Arg Arg Asp
            100   105   110

Asn Gly Ser Tyr Phe Phe Arg Met Glu Arg Gly Ser Thr Lys Tyr Ser
            115   120   125

Tyr Lys Ser Pro Gln Leu Ser Val His Val Thr Asp Leu Thr His Arg
        130   135   140

Pro Lys Ile Leu Ile Pro Gly Thr Leu Glu Pro Gly His Ser Lys Asn

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145                    150                    155                    160


Leu Thr Cys Ser Val Ser Trp Ala Cys Glu Gln Gly Thr Pro Pro Ile
                165                    170                    175


Phe Ser Trp Leu Ser Ala Ala Pro Thr Ser Leu Gly Pro Arg Thr Thr
                180                    185                    190


His Ser Ser Val Leu Ile Ile Thr Pro Arg Pro Gln Asp His Gly Thr
                195                    200                    205


Asn Leu Thr Cys Gln Val Lys Phe Ala Gly Ala Gly Val Thr Thr Glu
    210                    215                    220


Arg Thr Ile Gln Leu Asn Val Thr Tyr Val Pro Gln Asn Pro Thr Thr
225                    230                    235                    240


Gly Ile Phe Pro Gly Asp Gly Ser Gly Lys Gln Glu Thr Arg Ala Gly
                245                    250                    255


Leu Val His Gly Ala Ile Gly Gly Ala Gly Val Thr Ala Leu Leu Ala
                260                    265                    270


Leu Cys Leu Cys Leu Ile Phe Phe Ile Val Lys Thr His Arg Arg Lys
                275                    280                    285


Ala Ala Arg Thr Ala Val Gly Ser Asn Asp Thr His Pro Thr Thr Gly
    290                    295                    300


Ser Ala Ser Pro Lys His Gln Lys Asn Ser Lys Leu His Gly Pro Thr
305                    310                    315                    320


Glu Thr Ser Ser Cys Ser Gly Ala Ala Pro Thr Val Glu Met Asp Glu
                325                    330                    335


Glu Leu His Tyr Ala Ser Leu Asn Phe His Gly Met Asn Pro Ser Lys
                340                    345                    350


Asp Thr Ser Thr Glu Tyr Ser Glu Val Arg Thr Gln
        355                    360


<210>    2928
<211>    326
<212>    PRT
<213>    Homo sapiens

<400>    2928
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Met Asp Tyr Ser His Gln Thr Ser Leu Val Pro Cys Gly Gln Asp Lys
1               5               10              15


Tyr Ile Ser Lys Asn Glu Leu Leu Leu His Leu Lys Thr Tyr Asn Leu
            20              25              30


Tyr Tyr Glu Gly Gln Asn Leu Gln Leu Arg His Arg Glu Glu Glu Asp
        35              40              45


Glu Phe Ile Val Glu Gly Leu Leu Asn Ile Ser Trp Gly Leu Arg Arg
    50              55              60


Pro Ile Arg Leu Gln Met Gln Asp Asp Asn Glu Arg Ile Arg Pro Pro
65              70              75              80


Pro Ser Ser Ser Ser Trp His Ser Gly Cys Asn Leu Gly Ala Gln Gly
            85              90              95


Thr Thr Leu Lys Pro Leu Thr Val Pro Lys Val Gln Ile Ser Glu Val
            100             105             110


Asp Ala Pro Pro Glu Gly Asp Gln Met Pro Ser Ser Thr Asp Ser Arg
    115             120             125


Gly Leu Lys Pro Leu Gln Glu Asp Thr Pro Gln Leu Met Arg Thr Arg
    130             135             140


Ser Asp Val Gly Val Arg Arg Arg Gly Asn Val Arg Thr Pro Ser Asp
145             150             155             160


Gln Arg Arg Ile Arg Arg His Arg Phe Ser Ile Asn Gly His Phe Tyr
            165             170             175


Asn His Lys Thr Ser Val Phe Thr Pro Ala Tyr Gly Ser Val Thr Asn
            180             185             190


Val Arg Ile Asn Ser Thr Met Thr Thr Pro Gln Val Leu Lys Leu Leu
    195             200             205


Leu Asn Lys Phe Lys Ile Glu Asn Ser Ala Glu Glu Phe Ala Leu Tyr
    210             215             220


Val Val His Thr Ser Gly Glu Lys Gln Lys Leu Lys Ala Thr Asp Tyr
225             230             235             240
```

1270

Pro Leu Ile Ala Arg Ile Leu Gln Gly Pro Cys Glu Gln Ile Ser Lys
                    245   250   255

Val Phe Leu Met Glu Lys Asp Gln Val Glu Glu Val Thr Tyr Asp Val
            260   265   270

Ala Gln Tyr Ile Lys Phe Glu Met Pro Val Leu Lys Ser Phe Ile Gln
        275   280   285

Lys Leu Gln Glu Glu Glu Asp Arg Glu Val Lys Lys Leu Met Arg Lys
    290   295   300

Tyr Thr Val Leu Arg Leu Met Ile Arg Gln Arg Leu Glu Glu Ile Ala
305   310   315   320

Glu Thr Pro Ala Thr Ile
                    325

<210> 2929
<211> 1842
<212> PRT
<213> Homo sapiens

<400> 2929

Leu Pro His Gly Arg Thr Arg Gly Pro Gly Pro Ala Met Ala Pro Trp
1   5   10   15

Arg Lys Ala Asp Lys Glu Arg His Gly Val Ala Ile Tyr Asn Phe Gln
            20   25   30

Gly Ser Gly Ala Pro Gln Leu Ser Leu Gln Ile Gly Asp Val Val Arg
        35   40   45

Ile Gln Glu Thr Cys Gly Asp Trp Tyr Arg Gly Tyr Leu Ile Lys His
    50   55   60

Lys Met Leu Gln Gly Ile Phe Pro Lys Ser Phe Ile His Ile Lys Glu
65   70   75   80

Val Thr Val Glu Lys Arg Arg Asn Thr Glu Asn Ile Ile Pro Ala Glu
                85   90   95

Ile Pro Leu Ala Gln Glu Val Thr Thr Thr Leu Trp Glu Trp Gly Ser
            100   105   110

Ile Trp Lys Gln Leu Tyr Val Ala Ser Lys Lys Glu Arg Phe Leu Gln
        115   120   125

1271

Val Gln Ser Met Met Tyr Asp Leu Met Glu Trp Arg Ser Gln Leu Leu
    130   135   140

Ser Gly Thr Leu Pro Lys Asp Glu Leu Lys Glu Leu Lys Gln Lys Val
145   150   155   160

Thr Ser Lys Ile Asp Tyr Gly Asn Lys Ile Leu Glu Leu Asp Leu Ile
                165   170   175

Val Arg Asp Glu Asp Gly Asn Ile Leu Asp Pro Asp Asn Thr Ser Val
            180   185   190

Ile Ser Leu Phe His Ala His Glu Glu Ala Thr Asp Lys Ile Thr Glu
        195   200   205

Arg Ile Lys Glu Glu Met Ser Lys Asp Gln Pro Asp Tyr Ala Met Tyr
    210   215   220

Ser Arg Ile Ser Ser Ser Pro Thr His Ser Leu Tyr Val Phe Val Arg
225   230   235   240

Asn Phe Val Cys Arg Ile Gly Glu Asp Ala Glu Leu Phe Met Ser Leu
            245   250   255

Tyr Asp Pro Asn Lys Gln Thr Val Ile Ser Glu Asn Tyr Leu Val Arg
        260   265   270

Trp Gly Ser Arg Gly Phe Pro Lys Glu Ile Glu Met Leu Asn Asn Leu
        275   280   285

Lys Val Val Phe Thr Asp Leu Gly Asn Lys Asp Leu Asn Arg Asp Lys
    290   295   300

Ile Tyr Leu Ile Cys Gln Ile Val Arg Val Gly Lys Met Asp Leu Lys
305   310   315   320

Asp Thr Gly Ala Lys Lys Cys Thr Gln Gly Leu Arg Arg Pro Phe Gly
                325   330   335

Val Ala Val Met Asp Ile Thr Asp Ile Ile Lys Gly Lys Ala Glu Ser
            340   345   350

Asp Glu Glu Lys Gln His Phe Ile Pro Phe His Pro Val Thr Ala Glu
        355   360   365

1272

```
Asn Asp Phe Leu His Ser Leu Leu Gly Lys Val Ile Ala Ser Lys Gly
    370                 375             380

Asp Ser Gly Gly Gln Gly Leu Trp Val Thr Met Lys Met Leu Val Gly
385             390             395                     400

Asp Ile Ile Gln Ile Arg Lys Asp Tyr Pro His Leu Val Asp Arg Thr
            405             410                     415

Thr Val Val Ala Arg Lys Leu Gly Phe Pro Glu Ile Ile Met Pro Gly
        420             425                 430

Asp Val Arg Asn Asp Ile Tyr Ile Thr Leu Leu Gln Gly Asp Phe Asp
        435             440                 445

Lys Tyr Asn Lys Thr Thr Gln Arg Asn Val Glu Val Ile Met Cys Val
    450             455                 460

Cys Ala Glu Asp Gly Lys Thr Leu Pro Asn Ala Ile Cys Val Gly Ala
465             470             475                     480

Gly Asp Lys Pro Met Asn Glu Tyr Arg Ser Val Val Tyr Tyr Gln Val
            485             490                 495

Lys Gln Pro Arg Trp Met Glu Thr Val Lys Val Ala Val Pro Ile Glu
        500             505                 510

Asp Met Gln Arg Ile His Leu Arg Phe Met Phe Arg His Arg Ser Ser
        515             520                 525

Leu Glu Ser Lys Asp Lys Gly Glu Lys Asn Phe Ala Met Ser Tyr Val
    530             535                 540

Lys Leu Met Lys Glu Asp Gly Thr Thr Leu His Asp Gly Phe His Asp
545             550                 555                     560

Leu Val Val Leu Lys Gly Asp Ser Lys Lys Met Glu Asp Ala Ser Ala
            565             570                     575

Tyr Leu Thr Leu Pro Ser Tyr Arg His His Val Glu Asn Lys Gly Ala
            580             585                     590

Thr Leu Ser Arg Ser Ser Ser Ser Val Gly Gly Leu Ser Val Ser Ser
        595             600                 605
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Arg Asp Val Phe Ser Ile Ser Thr Leu Val Cys Ser Thr Lys Leu Thr
    610             615             620

Gln Asn Val Gly Leu Leu Gly Leu Leu Lys Trp Arg Met Lys Pro Gln
625             630             635             640

Leu Leu Gln Glu Asn Leu Glu Lys Leu Lys Ile Val Asp Gly Glu Glu
            645             650             655

Val Val Lys Phe Leu Gln Asp Thr Leu Asp Ala Leu Phe Asn Ile Met
            660             665             670

Met Glu His Ser Gln Ser Asp Glu Tyr Asp Ile Leu Val Phe Asp Ala
        675             680             685

Leu Ile Tyr Ile Ile Gly Leu Ile Ala Asp Arg Lys Phe Gln His Phe
    690             695             700

Asn Thr Val Leu Glu Ala Tyr Ile Gln Gln His Phe Ser Ala Thr Leu
705             710             715             720

Ala Tyr Lys Lys Leu Met Thr Val Leu Lys Thr Tyr Leu Asp Thr Ser
            725             730             735

Ser Arg Gly Glu Gln Cys Glu Pro Ile Leu Arg Thr Leu Lys Ala Leu
            740             745             750

Glu Tyr Val Phe Lys Phe Ile Val Arg Ser Arg Thr Leu Phe Ser Gln
            755             760             765

Leu Tyr Glu Gly Lys Glu Gln Met Glu Phe Glu Glu Ser Met Arg Arg
    770             775             780

Leu Phe Glu Ser Ile Asn Asn Leu Met Lys Ser Gln Tyr Lys Thr Thr
785             790             795             800

Ile Leu Leu Gln Val Ala Ala Leu Lys Tyr Ile Pro Ser Val Leu His
            805             810             815

Asp Val Glu Met Val Phe Asp Ala Lys Leu Leu Ser Gln Leu Leu Tyr
            820             825             830

Glu Phe Tyr Thr Cys Ile Pro Pro Val Lys Leu Gln Lys Gln Lys Val
        835             840             845

Gln Ser Met Asn Glu Ile Val Gln Ser Asn Leu Phe Lys Lys Gln Glu
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            850                    855                    860


Cys Arg Asp Ile Leu Leu Pro Val Ile Thr Lys Glu Leu Lys Glu Leu
865                 870                 875                 880


Leu Glu Gln Lys Asp Asp Met Gln His Gln Val Leu Glu Arg Lys Tyr
                885                 890                 895


Cys Val Glu Leu Leu Asn Ser Ile Leu Glu Val Leu Ser Tyr Gln Asp
                900                 905                 910


Ala Ala Phe Thr Tyr His His Ile Gln Glu Ile Met Val Gln Leu Leu
                915                 920                 925


Arg Thr Val Asn Arg Thr Val Ile Thr Met Gly Arg Asp His Ile Leu
        930                 935                 940


Ile Ser His Phe Val Ala Cys Met Thr Ala Ile Leu Asn Gln Met Gly
945                 950                 955                 960


Asp Gln His Tyr Ser Phe Tyr Ile Glu Thr Phe Gln Thr Ser Ser Glu
                965                 970                 975


Leu Val Asp Phe Leu Met Glu Thr Phe Ile Met Phe Lys Asp Leu Ile
                980                 985                 990


Gly Lys Asn Val Tyr Pro Gly Asp  Trp Met Ala Met Ser  Met Val Gln
        995                 1000                 1005


Asn Arg  Val Phe Leu Arg Ala  Ile Asn Lys Phe Ala  Glu Thr Met
    1010                 1015                 1020


Asn Gln  Lys Phe Leu Glu His  Thr Asn Phe Glu Phe  Gln Leu Trp
    1025                 1030                 1035


Asn Asn  Tyr Phe His Leu Ala  Val Ala Phe Ile Thr  Gln Asp Ser
    1040                 1045                 1050


Leu Gln  Leu Glu Gln Phe Ser  His Ala Lys Tyr Asn  Lys Ile Leu
    1055                 1060                 1065


Asn Lys  Tyr Gly Asp Met Arg  Arg Leu Ile Gly Phe  Ser Ile Arg
    1070                 1075                 1080


Asp Met  Trp Tyr Lys Leu Gly  Gln Asn Lys Ile Cys  Phe Ile Pro
    1085                 1090                 1095
```

Gly Met Val Gly Pro Ile Leu Glu Met Thr Leu Ile Pro Glu Ala
    1100   1105   1110

Glu Leu Arg Lys Ala Thr Ile Pro Ile Phe Phe Asp Met Met Leu
    1115   1120   1125

Cys Glu Tyr Gln Arg Ser Gly Asp Phe Lys Lys Phe Glu Asn Glu
    1130   1135   1140

Ile Ile Leu Lys Leu Asp His Glu Val Glu Gly Gly Arg Gly Asp
    1145   1150   1155

Glu Gln Tyr Met Gln Leu Leu Glu Ser Ile Leu Met Glu Cys Ala
    1160   1165   1170

Ala Glu His Pro Thr Ile Ala Lys Ser Val Glu Asn Phe Val Asn
    1175   1180   1185

Leu Val Lys Gly Leu Leu Glu Lys Leu Leu Asp Tyr Arg Gly Val
    1190   1195   1200

Met Thr Asp Glu Ser Lys Asp Asn Arg Met Ser Cys Thr Val Asn
    1205   1210   1215

Leu Leu Asn Phe Tyr Lys Asp Asn Asn Arg Glu Glu Met Tyr Ile
    1220   1225   1230

Arg Tyr Leu Tyr Lys Leu Arg Asp Leu His Leu Asp Cys Asp Asn
    1235   1240   1245

Tyr Thr Glu Ala Ala Tyr Thr Leu Leu Leu His Thr Trp Leu Leu
    1250   1255   1260

Lys Trp Ser Asp Glu Gln Cys Ala Ser Gln Val Met Gln Thr Gly
    1265   1270   1275

Gln Gln His Pro Gln Thr His Arg Gln Leu Lys Glu Thr Leu Tyr
    1280   1285   1290

Glu Thr Ile Ile Gly Tyr Phe Asp Lys Gly Lys Met Trp Glu Glu
    1295   1300   1305

Ala Ile Ser Leu Cys Lys Glu Leu Ala Glu Gln Tyr Glu Met Glu
    1310   1315   1320

```
Ile Phe Asp Tyr Glu Leu Leu Ser Gln Asn Leu Ile Gln Gln Ala
    1325             1330             1335


Lys Phe Tyr Glu Ser Ile Met Lys Ile Leu Arg Pro Lys Pro Asp
    1340             1345             1350


Tyr Phe Ala Val Gly Tyr Tyr Gly Gln Gly Phe Pro Ser Phe Leu
    1355             1360             1365


Arg Asn Lys Val Phe Ile Tyr Arg Gly Lys Glu Tyr Glu Arg Arg
    1370             1375             1380


Glu Asp Phe Gln Met Gln Leu Met Thr Gln Phe Pro Asn Ala Glu
    1385             1390             1395


Lys Met Asn Thr Thr Ser Ala Pro Gly Asp Asp Val Lys Asn Ala
    1400             1405             1410


Pro Gly Gln Tyr Ile Gln Cys Phe Thr Val Gln Pro Val Leu Asp
    1415             1420             1425


Glu His Pro Arg Phe Lys Asn Lys Pro Val Pro Asp Gln Ile Ile
    1430             1435             1440


Asn Phe Tyr Lys Ser Asn Tyr Val Gln Arg Phe His Tyr Ser Arg
    1445             1450             1455


Pro Val Arg Arg Gly Thr Val Asp Pro Glu Asn Glu Phe Ala Ser
    1460             1465             1470


Met Trp Ile Glu Arg Thr Ser Phe Val Thr Ala Tyr Lys Leu Pro
    1475             1480             1485


Gly Ile Leu Arg Trp Phe Glu Val Val His Met Ser Gln Thr Thr
    1490             1495             1500


Ile Ser Pro Leu Glu Asn Ala Ile Glu Thr Met Ser Thr Ala Asn
    1505             1510             1515


Glu Lys Ile Leu Met Met Ile Asn Gln Tyr Gln Ser Asp Glu Thr
    1520             1525             1530


Leu Pro Ile Asn Pro Leu Ser Met Leu Leu Asn Gly Ile Val Asp
    1535             1540             1545
```

1277

Pro Ala   Val Met Gly Gly Phe   Ala Lys Tyr Glu Lys   Ala Phe Phe
    1550   1555   1560

Thr Glu   Glu Tyr Val Arg Asp   His Pro Glu Asp Gln   Asp Lys Leu
    1565   1570   1575

Thr His   Leu Lys Asp Leu Ile   Ala Trp Gln Ile Pro   Phe Leu Gly
    1580   1585   1590

Ala Gly   Ile Lys Ile His Glu   Lys Arg Val Ser Asp   Asn Leu Arg
    1595   1600   1605

Pro Phe   His Asp Arg Met Glu   Glu Cys Phe Lys Asn   Leu Lys Met
    1610   1615   1620

Lys Val   Glu Lys Glu Tyr Gly   Val Arg Glu Met Pro   Asp Phe Asp
    1625   1630   1635

Asp Arg   Arg Val Gly Arg Pro   Arg Ser Met Leu Arg   Ser Tyr Arg
    1640   1645   1650

Gln Met   Ser Ile Ile Ser Leu   Ala Ser Met Asn Ser   Asp Cys Ser
    1655   1660   1665

Thr Pro   Ser Lys Pro Thr Ser   Glu Ser Phe Asp Leu   Glu Leu Ala
    1670   1675   1680

Ser Pro   Lys Thr Pro Arg Val   Glu Gln Glu Glu Pro   Ile Ser Pro
    1685   1690   1695

Gly Ser   Thr Leu Pro Glu Val   Lys Leu Arg Arg Ser   Lys Lys Arg
    1700   1705   1710

Thr Lys   Arg Ser Ser Val Val   Phe Ala Asp Glu Lys   Ala Ala Ala
    1715   1720   1725

Glu Ser   Asp Leu Lys Arg Leu   Ser Arg Lys His Glu   Phe Met Ser
    1730   1735   1740

Asp Thr   Asn Leu Ser Glu His   Ala Ala Ile Pro Leu   Lys Ala Ser
    1745   1750   1755

Val Leu   Ser Gln Met Ser Phe   Ala Ser Gln Ser Met   Pro Thr Ile
    1760   1765   1770

Pro Ala   Leu Ala Leu Ser Val   Ala Gly Ile Pro Gly   Leu Asp Glu

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            1775                    1780                        1785


Ala Asn  Thr Ser Pro Arg Leu  Ser Gln Thr Phe Leu  Gln Leu Ser
    1790                   1795                  1800


Asp Gly  Asp Lys Lys Thr Leu  Thr Arg Lys Lys Val  Asn Gln Phe
    1805                   1810                  1815


Phe Lys  Thr Met Leu Ala Ser  Lys Ser Ala Glu Glu  Gly Lys Gln
    1820                   1825                  1830


Ile Pro  Asp Ser Leu Ser Thr  Asp Leu
    1835                   1840


<210>   2930
<211>   386
<212>   PRT
<213>   Homo sapiens

<400>   2930

Met Glu Glu Leu Asp Ala Leu Leu Glu Glu Leu Glu Arg Ser Thr Leu
1                   5                   10                  15


Gln Asp Ser Asp Glu Tyr Ser Asn Pro Ala Pro Leu Pro Leu Asp Gln
            20                  25                  30


His Ser Arg Lys Glu Thr Asn Leu Asp Glu Thr Ser Glu Ile Leu Ser
        35                  40                  45


Ile Gln Asp Asn Thr Ser Pro Leu Pro Ala Gln Leu Val Tyr Thr Thr
    50                  55                  60


Asn Ile Gln Glu Leu Asn Val Tyr Ser Glu Ala Gln Glu Pro Lys Glu
65                  70                  75                  80


Ser Pro Pro Pro Ser Lys Thr Ser Ala Ala Ala Gln Leu Asp Glu Leu
            85                  90                  95


Met Ala His Leu Thr Glu Met Gln Ala Lys Val Ala Val Arg Ala Asp
            100                 105                 110


Ala Gly Lys Lys His Leu Pro Asp Lys Gln Asp His Lys Ala Ser Leu
        115                 120                 125


Asp Ser Met Leu Gly Gly Leu Glu Gln Glu Leu Gln Asp Leu Gly Ile
    130                 135                 140
```

```
Ala Thr Val Pro Lys Gly His Cys Ala Ser Cys Gln Lys Pro Ile Ala
145             150             155                 160


Gly Lys Val Ile His Ala Leu Gly Gln Ser Trp His Pro Glu His Phe
                165             170                 175


Val Cys Thr His Cys Lys Glu Glu Ile Gly Ser Ser Pro Phe Phe Glu
            180             185                 190


Arg Ser Gly Leu Ala Tyr Cys Pro Asn Asp Tyr His Gln Leu Phe Ser
        195             200             205


Pro Arg Cys Ala Tyr Cys Ala Ala Pro Ile Leu Asp Lys Val Leu Thr
    210             215             220


Ala Met Asn Gln Thr Trp His Pro Glu His Phe Phe Cys Ser His Cys
225             230             235                 240


Gly Glu Val Phe Gly Ala Glu Gly Phe His Glu Lys Asp Lys Lys Pro
            245             250             255


Tyr Cys Arg Lys Asp Phe Leu Ala Met Phe Ser Pro Lys Cys Gly Gly
        260             265             270


Cys Asn Arg Pro Val Leu Glu Asn Tyr Leu Ser Ala Met Asp Thr Val
        275             280             285


Trp His Pro Glu Cys Phe Val Cys Gly Asp Cys Phe Thr Ser Phe Ser
    290             295             300


Thr Gly Ser Phe Phe Glu Leu Asp Gly Arg Pro Phe Cys Glu Leu His
305             310             315                 320


Tyr His His Arg Arg Gly Thr Leu Cys His Gly Cys Gly Gln Pro Ile
            325             330             335


Thr Gly Arg Cys Ile Ser Ala Met Gly Tyr Lys Phe His Pro Glu His
        340             345             350


Phe Val Cys Ala Phe Cys Leu Thr Gln Leu Ser Lys Gly Ile Phe Arg
        355             360             365


Glu Gln Asn Asp Lys Thr Tyr Cys Gln Pro Cys Phe Asn Lys Leu Phe
    370             375             380
```

Pro Leu
385

<210> 2931
<211> 368
<212> PRT
<213> Homo sapiens

<400> 2931

Met Val Leu Glu Val Ser Asp His Gln Val Leu Asn Asp Ala Glu Val
1   5   10   15

Ala Ala Leu Leu Glu Asn Phe Ser Ser Ser Tyr Asp Tyr Gly Glu Asn
                20   25   30

Glu Ser Asp Ser Cys Cys Thr Ser Pro Pro Cys Pro Gln Asp Phe Ser
                35   40   45

Leu Asn Phe Asp Arg Ala Phe Leu Pro Ala Leu Tyr Ser Leu Leu Phe
        50   55   60

Leu Leu Gly Leu Leu Gly Asn Gly Ala Val Ala Ala Val Leu Leu Ser
65   70   75   80

Arg Arg Thr Ala Leu Ser Ser Thr Asp Thr Phe Leu Leu His Leu Ala
                85   90   95

Val Ala Asp Thr Leu Leu Val Leu Thr Leu Pro Leu Trp Ala Val Asp
            100   105   110

Ala Ala Val Gln Trp Val Phe Gly Ser Gly Leu Cys Lys Val Ala Gly
        115   120   125

Ala Leu Phe Asn Ile Asn Phe Tyr Ala Gly Ala Leu Leu Leu Ala Cys
        130   135   140

Ile Ser Phe Asp Arg Tyr Leu Asn Ile Val His Ala Thr Gln Leu Tyr
145   150   155   160

Arg Arg Gly Pro Pro Ala Arg Val Thr Leu Thr Cys Leu Ala Val Trp
                165   170   175

Gly Leu Cys Leu Leu Phe Ala Leu Pro Asp Phe Ile Phe Leu Ser Ala
            180   185   190

His His Asp Glu Arg Leu Asn Ala Thr His Cys Gln Tyr Asn Phe Pro
            195   200   205

1281

Gln Val Gly Arg Thr Ala Leu Arg Val Leu Gln Leu Val Ala Gly Phe
    210   215   220

Leu Leu Pro Leu Leu Val Met Ala Tyr Cys Tyr Ala His Ile Leu Ala
225   230   235   240

Val Leu Leu Val Ser Arg Gly Gln Arg Leu Arg Ala Met Arg Leu
                245   250   255

Val Val Val Val Val Val Ala Phe Ala Leu Cys Trp Thr Pro Tyr His
            260   265   270

Leu Val Val Leu Val Asp Ile Leu Met Asp Leu Gly Ala Leu Ala Arg
        275   280   285

Asn Cys Gly Arg Glu Ser Arg Val Asp Val Ala Lys Ser Val Thr Ser
    290   295   300

Gly Leu Gly Tyr Met His Cys Cys Leu Asn Pro Leu Leu Tyr Ala Phe
305   310   315   320

Val Gly Val Lys Phe Arg Glu Arg Met Trp Met Leu Leu Leu Arg Leu
                325   330   335

Gly Cys Pro Asn Gln Arg Gly Leu Gln Arg Gln Pro Ser Ser Ser Arg
            340   345   350

Arg Asp Ser Ser Trp Ser Glu Thr Ser Glu Ala Ser Tyr Ser Gly Leu
            355   360   365

<210> 2932
<211> 359
<212> PRT
<213> Homo sapiens

<400> 2932

Met Ala Glu Ala Ile Thr Tyr Ala Asp Leu Arg Phe Val Lys Ala Pro
1   5   10   15

Leu Lys Lys Ser Ile Ser Ser Arg Leu Gly Gln Asp Pro Gly Ala Asp
            20   25   30

Asp Asp Gly Glu Ile Thr Tyr Glu Asn Val Gln Val Pro Ala Val Leu
        35   40   45

1282

Gly Val Pro Ser Ser Leu Ala Ser Ser Val Leu Gly Asp Lys Ala Ala
    50   55   60

Val Lys Ser Glu Gln Pro Thr Ala Ser Trp Arg Ala Val Thr Ser Pro
65   70   75   80

Ala Val Gly Arg Ile Leu Pro Cys Arg Thr Thr Cys Leu Arg Tyr Leu
            85   90   95

Leu Leu Gly Leu Leu Leu Thr Cys Leu Leu Leu Gly Val Thr Ala Ile
            100   105   110

Cys Leu Gly Val Arg Tyr Leu Gln Val Ser Gln Gln Leu Gln Gln Thr
            115   120   125

Asn Arg Val Leu Glu Val Thr Asn Ser Ser Leu Arg Gln Gln Leu Arg
    130   135   140

Leu Lys Ile Thr Gln Leu Gly Gln Ser Ala Glu Asp Leu Gln Gly Ser
145   150   155   160

Arg Arg Glu Leu Ala Gln Ser Gln Glu Ala Leu Gln Val Glu Gln Arg
                165   170   175

Ala His Gln Ala Ala Glu Gly Gln Leu Gln Ala Cys Gln Ala Asp Arg
            180   185   190

Gln Lys Thr Lys Glu Thr Leu Gln Ser Glu Glu Gln Gln Arg Arg Ala
    195   200   205

Leu Glu Gln Lys Leu Ser Asn Met Glu Asn Arg Leu Lys Pro Phe Phe
    210   215   220

Thr Cys Gly Ser Ala Asp Thr Cys Cys Pro Ser Gly Trp Ile Met His
225   230   235   240

Gln Lys Ser Cys Phe Tyr Ile Ser Leu Thr Ser Lys Asn Trp Gln Glu
            245   250   255

Ser Gln Lys Gln Cys Glu Thr Leu Ser Ser Lys Leu Ala Thr Phe Ser
            260   265   270

Glu Ile Tyr Pro Gln Ser His Ser Tyr Tyr Phe Leu Asn Ser Leu Leu
            275   280   285

Pro Asn Gly Gly Ser Gly Asn Ser Tyr Trp Thr Gly Leu Ser Ser Asn

1283

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        290                  295                      300

Lys Asp Trp Lys Leu Thr Asp Asp Thr Gln Arg Thr Arg Thr Tyr Ala
305             310             315                 320

Gln Ser Ser Lys Cys Asn Lys Val His Lys Thr Trp Ser Trp Trp Thr
            325             330                 335

Leu Glu Ser Glu Ser Cys Arg Ser Ser Leu Pro Tyr Ile Cys Glu Met
            340             345             350

Thr Ala Phe Arg Phe Pro Asp
        355


<210>  2933
<211>  266
<212>  PRT
<213>  Homo sapiens

<400>  2933

Met Arg Val Thr Leu Ala Thr Ile Ala Trp Met Val Ser Phe Val Ser
1               5               10              15

Asn Tyr Ser His Thr Ala Asn Ile Leu Pro Asp Ile Glu Asn Glu Asp
            20              25              30

Phe Ile Lys Asp Cys Val Arg Ile His Asn Lys Phe Arg Ser Glu Val
        35              40              45

Lys Pro Thr Ala Ser Asp Met Leu Tyr Met Thr Trp Asp Pro Ala Leu
    50              55              60

Ala Gln Ile Ala Lys Ala Trp Ala Ser Asn Cys Gln Phe Ser His Asn
65              70              75              80

Thr Arg Leu Lys Pro Pro His Lys Leu His Pro Asn Phe Thr Ser Leu
            85              90              95

Gly Glu Asn Ile Trp Thr Gly Ser Val Pro Ile Phe Ser Val Ser Ser
            100             105             110

Ala Ile Thr Asn Trp Tyr Asp Glu Ile Gln Asp Tyr Asp Phe Lys Thr
        115             120             125

Arg Ile Cys Lys Lys Val Cys Gly His Tyr Thr Gln Val Val Trp Ala
    130             135             140
```

Asp Ser Tyr Lys Val Gly Cys Ala Val Gln Phe Cys Pro Lys Val Ser
145   150   155   160

Gly Phe Asp Ala Leu Ser Asn Gly Ala His Phe Ile Cys Asn Tyr Gly
                165   170   175

Pro Gly Gly Asn Tyr Pro Thr Trp Pro Tyr Lys Arg Gly Ala Thr Cys
                180   185   190

Ser Ala Cys Pro Asn Asn Asp Lys Cys Leu Asp Asn Leu Cys Val Asn
            195   200   205

Arg Gln Arg Asp Gln Val Lys Arg Tyr Tyr Ser Val Val Tyr Pro Gly
    210   215   220

Trp Pro Ile Tyr Pro Arg Asn Arg Tyr Thr Ser Leu Phe Leu Ile Val
225   230   235   240

Asn Ser Val Ile Leu Ile Leu Ser Val Ile Ile Thr Ile Leu Val Gln
                245   250   255

Leu Lys Tyr Pro Asn Leu Val Leu Leu Asp
            260   265

<210>   2934
<211>   1429
<212>   PRT
<213>   Homo sapiens

<400>   2934

Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu
1   5   10   15

Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Leu Ala Asn Lys Ala
            20   25   30

His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr
        35   40   45

Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln
    50   55   60

Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg
65   70   75   80

Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe

```
                85                      90                      95


     Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr
             100                 105                 110


     Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys
             115                 120                 125


     Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser
             130                 135                 140


     Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser Leu Leu Tyr Gln Ala Leu
     145                 150                 155                 160


     Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala
                     165                 170                 175


     Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro
             180                 185                 190


     Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu
             195                 200                 205


     Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg
         210                 215                 220


     Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr
     225                 230                 235                 240


     Pro Pro Gln Ala His Thr Ser Leu Gln Pro His His His Pro Trp Glu
                     245                 250                 255


     Pro Ser Val Arg Glu Ser Leu Cys Ser Thr Trp Pro Trp Lys Asn Glu
                     260                 265                 270


     Asp Phe Asn Gln Lys Phe Thr Gln Leu Leu Leu Leu Gln Arg Pro His
             275                 280                 285


     Pro Arg Ser Gln Asp Pro Leu Val Lys Arg Ser Trp Pro Asp Tyr Val
             290                 295                 300


     Glu Glu Asn Arg Gly His Leu Ile Glu Ile Arg Asp Leu Phe Gly Pro
     305                 310                 315                 320


     Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala
                     325                 330                 335
```

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Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly
        340             345             350

Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser
        355             360             365

Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile
370             375             380

Gly Lys Asp Gly Thr Ala Thr Pro Ala Pro Ile Arg Gln Ile Leu Ser
385             390             395             400

Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly
            405             410             415

Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln
        420             425             430

Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile
        435             440             445

Leu Pro Glu Ala Ser Phe Leu Ile Thr Ala Arg Thr Thr Ala Leu Gln
    450             455             460

Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly
465             470             475             480

Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp
            485             490             495

Glu Arg Gln Ala Ile Arg Ala Phe Arg Leu Val Lys Ser Asn Lys Glu
        500             505             510

Leu Trp Ala Leu Cys Leu Val Pro Trp Val Ser Trp Leu Ala Cys Thr
        515             520             525

Cys Leu Met Gln Gln Met Lys Arg Lys Glu Lys Leu Thr Leu Thr Ser
    530             535             540

Lys Thr Thr Thr Thr Leu Cys Leu His Tyr Leu Ala Gln Ala Leu Gln
545             550             555             560

Ala Gln Pro Leu Gly Pro Gln Leu Arg Asp Leu Cys Ser Leu Ala Ala
            565             570             575
```

Glu Gly Ile Trp Gln Lys Lys Thr Leu Phe Ser Pro Asp Asp Leu Arg
        580   585   590

Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly
        595   600   605

Ile Leu Gln Glu His Pro Ile Pro Leu Ser Tyr Ser Phe Ile His Leu
    610   615   620

Cys Phe Gln Glu Phe Phe Ala Ala Met Ser Tyr Val Leu Glu Asp Glu
625   630   635   640

Lys Gly Arg Gly Lys His Ser Asn Cys Ile Ile Asp Leu Glu Lys Thr
            645   650   655

Leu Glu Ala Tyr Gly Ile His Gly Leu Phe Gly Ala Ser Thr Thr Arg
        660   665   670

Phe Leu Leu Gly Leu Leu Ser Asp Glu Gly Glu Arg Glu Met Glu Asn
        675   680   685

Ile Phe His Cys Arg Leu Ser Gln Gly Arg Asn Leu Met Gln Trp Val
    690   695   700

Pro Ser Leu Gln Leu Leu Leu Gln Pro His Ser Leu Glu Ser Leu His
705   710   715   720

Cys Leu Tyr Glu Thr Arg Asn Lys Thr Phe Leu Thr Gln Val Met Ala
            725   730   735

His Phe Glu Glu Met Gly Met Cys Val Glu Thr Asp Met Glu Leu Leu
        740   745   750

Val Cys Thr Phe Cys Ile Lys Phe Ser Arg His Val Lys Lys Leu Gln
        755   760   765

Leu Ile Glu Gly Arg Gln His Arg Ser Thr Trp Ser Pro Thr Met Val
    770   775   780

Val Leu Phe Arg Trp Val Pro Val Thr Asp Ala Tyr Trp Gln Ile Leu
785   790   795   800

Phe Ser Val Leu Lys Val Thr Arg Asn Leu Lys Glu Leu Asp Leu Ser
            805   810   815

Gly Asn Ser Leu Ser His Ser Ala Val Lys Ser Leu Cys Lys Thr Leu
        820   825   830

Arg Arg Pro Arg Cys Leu Leu Glu Thr Leu Arg Leu Ala Gly Cys Gly
        835   840   845

Leu Thr Ala Glu Asp Cys Lys Asp Leu Ala Phe Gly Leu Arg Ala Asn
    850   855   860

Gln Thr Leu Thr Glu Leu Asp Leu Ser Phe Asn Val Leu Thr Asp Ala
865   870   875   880

Gly Ala Lys His Leu Cys Gln Arg Leu Arg Gln Pro Ser Cys Lys Leu
            885   890   895

Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln
        900   905   910

Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp
        915   920   925

Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Leu Cys Glu
    930   935   940

Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Leu Asp Gln
945   950   955   960

Thr Thr Leu Ser Asp Glu Met Arg Gln Glu Leu Arg Ala Leu Glu Gln
            965   970   975

Glu Lys Pro Gln Leu Leu Ile Phe Ser Arg Arg Lys Pro Ser Val Met
        980   985   990

Thr Pro Thr Glu Gly Leu Asp Thr Gly Glu Met Ser Asn Ser Thr Ser
        995   1000   1005

Ser Leu Lys Arg Gln Arg Leu Gly Ser Glu Arg Ala Ala Ser His
    1010   1015   1020

Val Ala Gln Ala Asn Leu Lys Leu Leu Asp Val Ser Lys Ile Phe
    1025   1030   1035

Pro Ile Ala Glu Ile Ala Glu Glu Ser Ser Pro Glu Val Val Pro
    1040   1045   1050

Val Glu Leu Leu Cys Val Pro Ser Pro Ala Ser Gln Gly Asp Leu

1289   /₁

```
                 1055                    1060                    1065


His Thr  Lys Pro Leu Gly Thr  Asp Asp Asp Phe Trp  Gly Pro Thr
     1070                 1075                 1080


Gly Pro  Val Ala Thr Glu Val  Val Asp Lys Glu Lys  Asn Leu Tyr
     1085                 1090                 1095


Arg Val  His Phe Pro Val Ala  Gly Ser Tyr Arg Trp  Pro Asn Thr
     1100                 1105                 1110


Gly Leu  Cys Phe Val Met Arg  Glu Ala Val Thr Val  Glu Ile Glu
     1115                 1120                 1125


Phe Cys  Val Trp Asp Gln Phe  Leu Gly Glu Ile Asn  Pro Gln His
     1130                 1135                 1140


Ser Trp  Met Val Ala Gly Pro  Leu Leu Asp Ile Lys  Ala Glu Pro
     1145                 1150                 1155


Gly Ala  Val Glu Ala Val His  Leu Pro His Phe Val  Ala Leu Gln
     1160                 1165                 1170


Gly Gly  His Val Asp Thr Ser  Leu Phe Gln Met Ala  His Phe Lys
     1175                 1180                 1185


Glu Glu  Gly Met Leu Leu Glu  Lys Pro Ala Arg Val  Glu Leu His
     1190                 1195                 1200


His Ile  Val Leu Glu Asn Pro  Ser Phe Ser Pro Leu  Gly Val Leu
     1205                 1210                 1215


Leu Lys  Met Ile His Asn Ala  Leu Arg Phe Ile Pro  Val Thr Ser
     1220                 1225                 1230


Val Val  Leu Leu Tyr His Arg  Val His Pro Glu Glu  Val Thr Phe
     1235                 1240                 1245


His Leu  Tyr Leu Ile Pro Ser  Asp Cys Ser Ile Arg  Lys Glu Leu
     1250                 1255                 1260


Glu Leu  Cys Tyr Arg Ser Pro  Gly Glu Asp Gln Leu  Phe Ser Glu
     1265                 1270                 1275


Phe Tyr  Val Gly His Leu Gly  Ser Gly Ile Arg Leu  Gln Val Lys
     1280                 1285                 1290
```

```
Asp Lys  Lys Asp Glu Thr Leu  Val Trp Glu Ala Leu  Val Lys Pro
    1295             1300              1305

Gly Asp  Leu Met Pro Ala Thr  Thr Leu Ile Pro Pro  Ala Arg Ile
    1310             1315              1320

Ala Val  Pro Ser Pro Leu Asp  Ala Pro Gln Leu Leu  His Phe Val
    1325             1330              1335

Asp Gln  Tyr Arg Glu Gln Leu  Ile Ala Arg Val Thr  Ser Val Glu
    1340             1345              1350

Val Val  Leu Asp Lys Leu His  Gly Gln Val Leu Ser  Gln Glu Gln
    1355             1360              1365

Tyr Glu  Arg Val Leu Ala Glu  Asn Thr Arg Pro Ser  Gln Met Arg
    1370             1375              1380

Lys Leu  Phe Ser Leu Ser Gln  Ser Trp Asp Arg Lys  Cys Lys Asp
    1385             1390              1395

Gly Leu  Tyr Gln Ala Leu Lys  Glu Thr His Pro His  Leu Ile Met
    1400             1405              1410

Glu Leu  Trp Glu Lys Gly Ser  Lys Lys Gly Leu Leu  Pro Leu Ser
    1415             1420              1425

Ser


<210>  2935
<211>  352
<212>  PRT
<213>  Homo sapiens

<400>  2935

Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
1               5               10              15

Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
            20              25              30

Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr Ser Ile Ile
        35              40              45
```

Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
    50   55   60

Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
65   70   75   80

Ser Val Ala Asp Leu Leu Phe Val Ile Thr Leu Pro Phe Trp Ala Val
            85   90   95

Asp Ala Val Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
            100   105   110

His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
            115   120   125

Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
    130   135   140

Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
145   150   155   160

Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn
            165   170   175

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
            180   185   190

Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
    195   200   205

Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys Ile Ile Ile Ser
    210   215   220

Lys Leu Ser His Ser Lys Gly His Gln Lys Arg Lys Ala Leu Lys Thr
225   230   235   240

Thr Val Ile Leu Ile Leu Ala Phe Phe Ala Cys Trp Leu Pro Tyr Tyr
            245   250   255

Ile Gly Ile Ser Ile Asp Ser Phe Ile Leu Leu Glu Ile Ile Lys Gln
            260   265   270

Gly Cys Glu Phe Glu Asn Thr Val His Lys Trp Ile Ser Ile Thr Glu
    275   280   285

Ala Leu Ala Phe Phe His Cys Cys Leu Asn Pro Ile Leu Tyr Ala Phe

1292

```
        290                    295                    300


Leu Gly Ala Lys Phe Lys Thr Ser Ala Gln His Ala Leu Thr Ser Val
305                 310                 315                 320


Ser Arg Gly Ser Ser Leu Lys Ile Leu Ser Lys Gly Lys Arg Gly Gly
                325                 330                 335


His Ser Ser Val Ser Thr Glu Ser Glu Ser Ser Ser Phe His Ser Ser
                340                 345                 350


<210>   2936
<211>   248
<212>   PRT
<213>   Homo sapiens

<400>   2936

Met Leu Ser Thr Val Gly Ser Phe Leu Gln Asp Leu Gln Asn Glu Asp
1                   5                   10                  15


Lys Gly Ile Lys Thr Ala Ala Ile Phe Thr Ala Asp Gly Asn Met Ile
                20                  25                  30


Ser Ala Ser Thr Leu Met Asp Ile Leu Leu Met Asn Asp Phe Lys Leu
            35                  40                  45


Val Ile Asn Lys Ile Ala Tyr Asp Val Gln Cys Pro Lys Arg Glu Lys
    50                  55                  60


Pro Ser Asn Glu His Thr Ala Glu Met Glu His Met Lys Ser Leu Val
65                  70                  75                  80


His Arg Leu Phe Thr Ile Leu His Leu Glu Glu Ser Gln Lys Lys Arg
                85                  90                  95


Glu His His Leu Leu Glu Lys Ile Asp His Leu Lys Glu Gln Leu Gln
            100                 105                 110


Pro Leu Glu Gln Val Lys Ala Gly Ile Glu Ala His Ser Glu Ala Lys
        115                 120                 125


Thr Ser Gly Leu Leu Trp Ala Gly Leu Ala Leu Leu Ser Ile Gln Gly
        130                 135                 140


Gly Ala Leu Ala Trp Leu Thr Trp Trp Val Tyr Ser Trp Asp Ile Met
145                 150                 155                 160
```

Glu Pro Val Thr Tyr Phe Ile Thr Phe Ala Asn Ser Met Val Phe Phe
            165   170   175

Ala Tyr Phe Ile Val Thr Arg Gln Asp Tyr Thr Tyr Ser Ala Val Lys
            180   185   190

Ser Arg Gln Phe Leu Gln Phe Phe His Lys Lys Ser Lys Gln Gln His
        195   200   205

Phe Asp Val Gln Gln Tyr Asn Lys Leu Lys Glu Asp Leu Ala Lys Ala
    210   215   220

Lys Glu Ser Leu Lys Gln Ala Arg His Ser Leu Cys Leu Gln Met Gln
225   230   235   240

Val Glu Glu Leu Asn Glu Lys Asn
                245

<210>   2937
<211>   790
<212>   PRT
<213>   Homo sapiens

<400>   2937

Met Ala Glu Gln Val Leu Pro Gln Ala Leu Tyr Leu Ser Asn Met Arg
1   5   10   15

Lys Ala Val Lys Ile Arg Glu Arg Thr Pro Glu Asp Ile Phe Lys Pro
            20   25   30

Thr Asn Gly Ile Ile His His Phe Lys Thr Met His Arg Tyr Thr Leu
            35   40   45

Glu Met Phe Arg Thr Cys Gln Phe Cys Pro Gln Phe Arg Glu Ile Ile
    50   55   60

His Lys Ala Leu Ile Asp Arg Asn Ile Gln Ala Thr Leu Glu Ser Gln
65   70   75   80

Lys Lys Leu Asn Trp Cys Arg Glu Val Arg Lys Leu Val Ala Leu Lys
                85   90   95

Thr Asn Gly Asp Gly Asn Cys Leu Met His Ala Thr Ser Gln Tyr Met
            100   105   110

Trp Gly Val Gln Asp Thr Asp Leu Val Leu Arg Lys Ala Leu Phe Ser

```
               115                    120                    125


Thr Leu Lys Glu Thr Asp Thr Arg Asn Phe Lys Phe Arg Trp Gln Leu
    130                 135                 140


Glu Ser Leu Lys Ser Gln Glu Phe Val Glu Thr Gly Leu Cys Tyr Asp
145                 150                 155                 160


Thr Arg Asn Trp Asn Asp Glu Trp Asp Asn Leu Ile Lys Met Ala Ser
                165                 170                 175


Thr Asp Thr Pro Met Ala Arg Ser Gly Leu Gln Tyr Asn Ser Leu Glu
            180                 185                 190


Glu Ile His Ile Phe Val Leu Cys Asn Ile Leu Arg Arg Pro Ile Ile
        195                 200                 205


Val Ile Ser Asp Lys Met Leu Arg Ser Leu Glu Ser Gly Ser Asn Phe
    210                 215                 220


Ala Pro Leu Lys Val Gly Gly Ile Tyr Leu Pro Leu His Trp Pro Ala
225                 230                 235                 240


Gln Glu Cys Tyr Arg Tyr Pro Ile Val Leu Gly Tyr Asp Ser His His
                245                 250                 255


Phe Val Pro Leu Val Thr Leu Lys Asp Ser Gly Pro Glu Ile Arg Ala
            260                 265                 270


Val Pro Leu Val Asn Arg Asp Arg Gly Arg Phe Glu Asp Leu Lys Val
        275                 280                 285


His Phe Leu Thr Asp Pro Glu Asn Glu Met Lys Glu Lys Leu Leu Lys
    290                 295                 300


Glu Tyr Leu Met Val Ile Glu Ile Pro Val Gln Gly Trp Asp His Gly
305                 310                 315                 320


Thr Thr His Leu Ile Asn Ala Ala Lys Leu Asp Glu Ala Asn Leu Pro
                325                 330                 335


Lys Glu Ile Asn Leu Val Asp Asp Tyr Phe Glu Leu Val Gln His Glu
            340                 345                 350


Tyr Lys Lys Trp Gln Glu Asn Ser Glu Gln Gly Arg Arg Glu Gly His
        355                 360                 365
```

Ala Gln Asn Pro Met Glu Pro Ser Val Pro Gln Leu Ser Leu Met Asp
    370   375   380

Val Lys Cys Glu Thr Pro Asn Cys Pro Phe Phe Met Ser Val Asn Thr
385   390   395   400

Gln Pro Leu Cys His Glu Cys Ser Glu Arg Arg Gln Lys Asn Gln Asn
            405   410   415

Lys Leu Pro Lys Leu Asn Ser Lys Pro Gly Pro Glu Gly Leu Pro Gly
        420   425   430

Met Ala Leu Gly Ala Ser Arg Gly Glu Ala Tyr Glu Pro Leu Ala Trp
    435   440   445

Asn Pro Glu Glu Ser Thr Gly Gly Pro His Ser Ala Pro Pro Thr Ala
    450   455   460

Pro Ser Pro Phe Leu Phe Ser Glu Thr Thr Ala Met Lys Cys Arg Ser
465   470   ·   475   480

Pro Gly Cys Pro Phe Thr Leu Asn Val Gln His Asn Gly Phe Cys Glu
            485   490   495

Arg Cys His Asn Ala Arg Gln Leu His Ala Ser His Ala Pro Asp His
        500   505   510

Thr Arg His Leu Asp Pro Gly Lys Cys Gln Ala Cys Leu Gln Asp Val
        515   520   525

Thr Arg Thr Phe Asn Gly Ile Cys Ser Thr Cys Phe Lys Arg Thr Thr
    530   535   540

Ala Glu Ala Ser Ser Ser Leu Ser Thr Ser Leu Pro Pro Ser Cys His
545   550   555   560

Gln Arg Ser Lys Ser Asp Pro Ser Arg Leu Val Arg Ser Pro Ser Pro
            565   570   575

His Ser Cys His Arg Ala Gly Asn Asp Ala Pro Ala Gly Cys Leu Ser
        580   585   590

Gln Ala Ala Arg Thr Pro Gly Asp Arg Thr Gly Thr Ser Lys Cys Arg
    595   600   605

```
Lys Ala Gly Cys Val Tyr Phe Gly Thr Pro Glu Asn Lys Gly Phe Cys
    610                 615                 620

Thr Leu Cys Phe Ile Glu Tyr Arg Glu Asn Lys His Phe Ala Ala Ala
625                 630                 635                 640

Ser Gly Lys Val Ser Pro Thr Ala Ser Arg Phe Gln Asn Thr Ile Pro
                645                 650                 655

Cys Leu Gly Arg Glu Cys Gly Thr Leu Gly Ser Thr Met Phe Glu Gly
                660                 665                 670

Tyr Cys Gln Lys Cys Phe Ile Glu Ala Gln Asn Gln Arg Phe His Glu
        675                 680                 685

Ala Lys Arg Thr Glu Glu Gln Leu Arg Ser Ser Gln Arg Arg Asp Val
    690                 695                 700

Pro Arg Thr Thr Gln Ser Thr Ser Arg Pro Lys Cys Ala Arg Ala Ser
705                 710                 715                 720

Cys Lys Asn Ile Leu Ala Cys Arg Ser Glu Glu Leu Cys Met Glu Cys
                725                 730                 735

Gln His Pro Asn Gln Arg Met Gly Pro Gly Ala His Arg Gly Glu Pro
            740                 745                 750

Ala Pro Glu Asp Pro Pro Lys Gln Arg Cys Arg Ala Pro Ala Cys Asp
            755                 760                 765

His Phe Gly Asn Ala Lys Cys Asn Gly Tyr Cys Asn Glu Cys Phe Gln
    770                 775                 780

Phe Lys Gln Met Tyr Gly
785                 790


<210>  2938
<211>  206
<212>  PRT
<213>  Homo sapiens

<400>  2938

Met Ala Leu Pro Cys Thr Leu Gly Leu Gly Met Leu Leu Ala Leu Pro
1               5                   10                  15


Gly Ala Leu Gly Ser Gly Gly Ser Ala Glu Asp Ser Val Gly Ser Ser
```

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              20                    25                    30


Ser Val Thr Val Val Leu Leu Leu Leu Leu Leu Leu Leu Ala Thr
         35                    40                    45


Gly Leu Ala Leu Ala Trp Arg Arg Leu Ser Arg Asp Ser Gly Gly Tyr
         50                    55                    60


Tyr His Pro Ala Arg Leu Gly Ala Ala Leu Trp Gly Arg Thr Arg Arg
65                    70                    75                    80


Leu Leu Trp Ala Ser Pro Pro Gly Arg Trp Leu Gln Ala Arg Ala Glu
                   85                    90                    95


Leu Gly Ser Thr Asp Asn Asp Leu Glu Arg Gln Glu Asp Glu Gln Asp
                  100                   105                   110


Thr Asp Tyr Asp His Val Ala Asp Gly Gly Leu Gln Ala Asp Pro Gly
                  115                   120                   125


Glu Gly Glu Gln Gln Cys Gly Glu Ala Ser Ser Pro Glu Gln Val Pro
                  130                   135                   140


Val Arg Ala Glu Glu Ala Arg Asp Ser Asp Thr Glu Gly Asp Leu Val
145                   150                   155                   160


Leu Gly Ser Pro Gly Pro Ala Ser Ala Gly Gly Ser Ala Glu Ala Leu
                  165                   170                   175


Leu Ser Asp Leu His Ala Phe Ala Gly Ser Ala Ala Trp Asp Asp Ser
                  180                   185                   190


Ala Arg Ala Ala Gly Gly Gln Gly Leu His Val Thr Ala Leu
                  195                   200                   205


<210>  2939
<211>  718
<212>  PRT
<213>  Homo sapiens


<400>  2939

Met Ile Val Asp Lys Leu Leu Asp Asp Ser Arg Gly Gly Glu Gly Leu
1                   5                    10                    15


Arg Asp Ala Ala Gly Gly Cys Gly Leu Met Thr Ser Pro Leu Asn Leu
                   20                    25                    30
```

1298

Ser Tyr Phe Tyr Gly Ala Ser Pro Pro Ala Ala Ala Pro Gly Ala Cys
        35   40   45

Asp Ala Ser Cys Ser Val Leu Gly Pro Ser Ala Pro Gly Ser Pro Gly
        50   55   60

Ser Asp Ser Ser Asp Phe Ser Ser Ala Ser Ser Val Ser Ser Cys Gly
65   70   75   80

Ala Val Glu Ser Arg Ser Arg Gly Gly Ala Arg Ala Glu Arg Gln Pro
                85   90   95

Val Glu Pro His Met Gly Val Gly Arg Gln Gln Arg Gly Pro Phe Gln
            100   105   110

Gly Val Arg Val Lys Asn Ser Val Lys Glu Leu Leu Leu His Ile Arg
            115   120   125

Ser His Lys Gln Lys Ala Ser Gly Gln Ala Val Asp Asp Phe Lys Thr
    130   135   140

Gln Gly Val Asn Ile Glu Gln Phe Arg Glu Leu Lys Asn Thr Val Ser
145   150   155   160

Tyr Ser Gly Lys Arg Lys Gly Pro Asp Ser Leu Ser Asp Gly Pro Ala
                165   170   175

Cys Lys Arg Pro Ala Leu Leu His Ser Gln Phe Leu Thr Pro Pro Gln
            180   185   190

Thr Pro Thr Pro Gly Glu Ser Met Glu Asp Val His Leu Asn Glu Pro
            195   200   205

Lys Gln Glu Ser Ser Ala Asp Leu Leu Gln Asn Ile Ile Asn Ile Lys
    210   215   220

Asn Glu Cys Ser Pro Val Ser Leu Asn Thr Val Gln Val Ser Trp Leu
225   230   235   240

Asn Pro Val Val Val Pro Gln Ser Ser Pro Ala Glu Gln Cys Gln Asp
                245   250   255

Phe His Gly Gly Gln Val Phe Ser Pro Pro Gln Lys Cys Gln Pro Phe
                260   265   270

1299

Gln Val Arg Gly Ser Gln Gln Met Ile Asp Gln Ala Ser Leu Tyr Gln
    275   280   285

Tyr Ser Pro Gln Asn Gln His Val Glu Gln Gln Pro His Tyr Thr His
    290   295   300

Lys Pro Thr Leu Glu Tyr Ser Pro Phe Pro Ile Pro Pro Gln Ser Pro
305   310   315   320

Ala Tyr Glu Pro Asn Leu Phe Asp Gly Pro Glu Ser Gln Phe Cys Pro
             325   330   335

Asn Gln Ser Leu Val Ser Leu Leu Gly Asp Gln Arg Glu Ser Glu Asn
             340   345   350

Ile Ala Asn Pro Met Gln Thr Ser Ser Ser Val Gln Gln Gln Asn Asp
         355   360   365

Ala His Leu His Ser Phe Ser Met Met Pro Ser Ser Ala Cys Glu Ala
    370   375   380

Met Val Gly His Glu Met Ala Ser Asp Ser Ser Asn Thr Ser Leu Pro
385   390   395   400

Phe Ser Asn Met Gly Asn Pro Met Asn Thr Thr Gln Leu Gly Lys Ser
             405   410   415

Leu Phe Gln Trp Gln Val Glu Gln Glu Glu Ser Lys Leu Ala Asn Ile
         420   425   430

Ser Gln Asp Gln Phe Leu Ser Lys Asp Ala Asp Gly Asp Thr Phe Leu
         435   440   445

His Ile Ala Val Ala Gln Gly Arg Arg Ala Leu Ser Tyr Val Leu Ala
    450   455   460

Arg Lys Met Asn Ala Leu His Met Leu Asp Ile Lys Glu His Asn Gly
465   470   475   480

Gln Ser Ala Phe Gln Val Ala Val Ala Ala Asn Gln His Leu Ile Val
             485   490   495

Gln Asp Leu Val Asn Ile Gly Ala Gln Val Asn Thr Thr Asp Cys Trp
         500   505   510

Gly Arg Thr Pro Leu His Val Cys Ala Glu Lys Gly His Ser Gln Val

                515   520   525

Leu Gln Ala Ile Gln Lys Gly Ala Val Gly Ser Asn Gln Phe Val Asp
    530   535   540

Leu Glu Ala Thr Asn Tyr Asp Gly Leu Thr Pro Leu His Cys Ala Val
545   550   555   560

Ile Ala His Asn Ala Val Val His Glu Leu Gln Arg Asn Gln Gln Pro
                565   570   575

His Ser Pro Glu Val Gln Glu Leu Leu Leu Lys Asn Lys Ser Leu Val
                580   585   590

Asp Thr Ile Lys Cys Leu Ile Gln Met Gly Ala Ala Val Glu Ala Lys
            595   600   605

Asp Arg Lys Ser Gly Arg Thr Ala Leu His Leu Ala Ala Glu Glu Ala
        610   615   620

Asn Leu Glu Leu Ile Arg Leu Phe Leu Glu Leu Pro Ser Cys Leu Ser
625   630   635   640

Phe Val Asn Ala Lys Ala Tyr Asn Gly Asn Thr Ala Leu His Val Ala
                645   650   655

Ala Ser Leu Gln Tyr Arg Leu Thr Gln Leu Asp Ala Val Arg Leu Leu
            660   665   670

Met Arg Lys Gly Ala Asp Pro Ser Thr Arg Asn Leu Glu Asn Glu Gln
        675   680   685

Pro Val His Leu Val Pro Asp Gly Pro Val Gly Glu Gln Ile Arg Arg
    690   695   700

Ile Leu Lys Gly Lys Ser Ile Gln Gln Arg Ala Pro Pro Tyr
705   710   715

<210> 2940
<211> 247
<212> PRT
<213> Homo sapiens

<400> 2940

Met Gln Pro Ile Leu Leu Leu Leu Ala Phe Leu Leu Leu Pro Arg Ala
1   5   10   15

```
Asp Ala Gly Glu Ile Ile Gly Gly His Glu Ala Lys Pro His Ser Arg
         20              25              30

Pro Tyr Met Ala Tyr Leu Met Ile Trp Asp Gln Lys Ser Leu Lys Arg
         35              40              45

Cys Gly Gly Phe Leu Ile Gln Asp Asp Phe Val Leu Thr Ala Ala His
50              55              60

Cys Trp Gly Ser Ser Ile Asn Val Thr Leu Gly Ala His Asn Ile Lys
65              70              75              80

Glu Gln Glu Pro Thr Gln Gln Phe Ile Pro Val Lys Arg Pro Ile Pro
             85              90              95

His Pro Ala Tyr Asn Pro Lys Asn Phe Ser Asn Asp Ile Met Leu Leu
             100             105             110

Gln Leu Glu Arg Lys Ala Lys Arg Thr Arg Ala Val Gln Pro Leu Arg
         115             120             125

Leu Pro Ser Asn Lys Ala Gln Val Lys Pro Gly Gln Thr Cys Ser Val
         130             135             140

Ala Gly Trp Gly Gln Thr Ala Pro Leu Gly Lys His Ser His Thr Leu
145             150             155             160

Gln Glu Val Lys Met Thr Val Gln Glu Asp Arg Lys Cys Glu Ser Asp
             165             170             175

Leu Arg His Tyr Tyr Asp Ser Thr Ile Glu Leu Cys Val Gly Asp Pro
             180             185             190

Glu Ile Lys Lys Thr Ser Phe Lys Gly Asp Ser Gly Gly Pro Leu Val
         195             200             205

Cys Asn Lys Val Ala Gln Gly Ile Val Ser Tyr Gly Arg Asn Asn Gly
         210             215             220

Met Pro Pro Arg Ala Cys Thr Lys Val Ser Ser Phe Val His Trp Ile
225             230             235             240

Lys Lys Thr Met Lys Arg Tyr
             245
```

```
<210>    2941
<211>    191
<212>    PRT
<213>    Homo sapiens

<400>    2941

Met His Asp Ser Asn Asn Val Glu Lys Asp Ile Thr Pro Ser Glu Leu
1               5                   10                  15


Pro Ala Asn Pro Gly Cys Leu His Ser Lys Glu His Ser Ile Lys Ala
            20                  25                  30


Thr Leu Ile Trp Arg Leu Phe Phe Leu Ile Met Phe Leu Thr Ile Ile
        35                  40                  45


Val Cys Gly Met Val Ala Ala Leu Ser Ala Ile Arg Ala Asn Cys His
    50                  55                  60


Gln Glu Pro Ser Val Cys Leu Gln Ala Ala Cys Pro Glu Ser Trp Ile
65                  70                  75                  80


Gly Phe Gln Arg Lys Cys Phe Tyr Phe Ser Asp Asp Thr Lys Asn Trp
                85                  90                  95


Thr Ser Ser Gln Arg Phe Cys Asp Ser Gln Asp Ala Asp Leu Ala Gln
            100                 105                 110


Val Glu Ser Phe Gln Glu Leu Asn Phe Leu Leu Arg Tyr Lys Gly Pro
        115                 120                 125


Ser Asp His Trp Ile Gly Leu Ser Arg Glu Gln Gly Gln Pro Trp Lys
    130                 135                 140


Trp Ile Asn Gly Thr Glu Trp Thr Arg Gln Phe Pro Ile Leu Gly Ala
145                 150                 155                 160


Gly Glu Cys Ala Tyr Leu Asn Asp Lys Gly Ala Ser Ser Ala Arg His
                165                 170                 175


Tyr Thr Glu Arg Lys Trp Ile Cys Ser Lys Ser Asp Ile His Val
            180                 185                 190


<210>    2942
<211>    441
<212>    PRT
<213>    Homo sapiens

<400>    2942
```

```
Met Glu Ile Arg Leu Asp Thr Leu Ser Ala Ser Leu Gly Arg Ser Ser
1               5               10                  15

Thr Leu Asn Asp Cys Asn Leu Glu Asp Lys Leu Ala Trp Tyr Glu Gly
            20                  25                  30

Glu Ala Tyr Met Trp His His Trp Lys Pro Phe Pro Glu Asn Pro Leu
        35                  40                  45

Trp Thr Cys Leu Asp Phe Gln Ile Ala Gln Val Gly Pro Trp Asp Tyr
    50                  55                  60

Cys Ser Ser Cys Ile Arg His Thr Arg Leu Lys Ser Ser Cys Ser Asp
65                  70                  75                  80

Met Asp Leu Leu His Ser Trp Arg Ser Ser Ser Phe Gly Asn Phe Asp
                85                  90                  95

Arg Phe Arg Asn Asn Ser Leu Ser Lys Pro Asp Asp Ser Thr Glu Ala
            100                 105                 110

His Glu Gly Asp Pro Thr Asn Gly Ser Gly Glu Gln Ser Lys Thr Ser
        115                 120                 125

Asn Asn Gly Gly Gly Leu Gly Lys Lys Met Arg Ala Ile Ser Trp Thr
        130                 135                 140

Met Lys Lys Lys Val Gly Lys Lys Tyr Ile Lys Ala Leu Ser Glu Glu
145                 150                 155                 160

Lys Asp Glu Glu Asp Gly Glu Asn Ala His Pro Tyr Arg Asn Ser Asp
                165                 170                 175

Pro Val Ile Gly Thr His Thr Glu Lys Val Ser Leu Lys Ala Ser Asp
                180                 185                 190

Ser Met Asp Ser Leu Tyr Ser Gly Gln Ser Ser Ser Gly Ile Thr
        195                 200                 205

Ser Cys Ser Asp Gly Thr Ser Asn Arg Asp Ser Phe Arg Leu Asp Asp
        210                 215                 220

Asp Gly Pro Tyr Ser Gly Pro Phe Cys Gly Arg Ala Arg Val His Thr
225                 230                 235                 240
```

1304

```
Asp Phe Thr Pro Ser Pro Tyr Asp Thr Asp Ser Leu Lys Ile Lys Lys
            245             250             255

Gly Asp Ile Ile Asp Ile Ile Cys Lys Thr Pro Met Gly Met Trp Thr
            260             265             270

Gly Met Leu Asn Asn Lys Val Gly Asn Phe Lys Phe Ile Tyr Val Asp
            275             280             285

Val Ile Ser Glu Glu Glu Ala Ala Pro Lys Lys Ile Lys Ala Asn Arg
            290             295             300

Arg Ser Asn Ser Lys Lys Ser Lys Thr Leu Gln Glu Phe Leu Glu Arg
305             310             315             320

Ile His Leu Gln Glu Tyr Thr Ser Thr Leu Leu Leu Asn Gly Tyr Glu
            325             330             335

Thr Leu Glu Asp Leu Lys Asp Ile Lys Glu Ser His Leu Ile Glu Leu
            340             345             350

Asn Ile Glu Asn Pro Asp Asp Arg Arg Arg Leu Leu Ser Ala Ala Glu
            355             360             365

Asn Phe Leu Glu Glu Glu Ile Ile Gln Glu Gln Glu Asn Glu Pro Glu
            370             375             380

Pro Leu Ser Leu Ser Ser Asp Ile Ser Leu Asn Lys Ser Gln Leu Asp
385             390             395             400

Asp Cys Pro Arg Asp Ser Gly Cys Tyr Ile Ser Ser Gly Asn Ser Asp
            405             410             415

Asn Gly Lys Glu Asp Leu Glu Ser Glu Asn Leu Ser Asp Met Val His
            420             425             430

Lys Ile Ile Ile Thr Glu Pro Ser Asp
            435             440


<210>  2943
<211>  564
<212>  PRT
<213>  Homo sapiens

<400>  2943

Met Lys Glu His Gly Gly Thr Phe Ser Ser Thr Gly Ile Ser Gly Gly
1               5               10              15
```

Ser Gly Asp Ser Ala Met Asp Ser Leu Gln Pro Leu Gln Pro Asn Tyr
        20   25   30

Met Pro Val Cys Leu Phe Ala Glu Glu Ser Tyr Gln Lys Leu Ala Met
        35   40   45

Glu Thr Leu Glu Glu Leu Asp Trp Cys Leu Asp Gln Leu Glu Thr Ile
    50   55   60

Gln Thr Tyr Arg Ser Val Ser Glu Met Ala Ser Asn Lys Phe Lys Arg
65   70   75   80

Met Leu Asn Arg Glu Leu Thr His Leu Ser Glu Met Ser Arg Ser Gly
                85   90   95

Asn Gln Val Ser Glu Tyr Ile Ser Asn Thr Phe Leu Asp Lys Gln Asn
            100   105   110

Asp Val Glu Ile Pro Ser Pro Thr Gln Lys Asp Arg Glu Lys Lys Lys
        115   120   125

Lys Gln Gln Leu Met Thr Gln Ile Ser Gly Val Lys Lys Leu Met His
    130   135   140

Ser Ser Ser Leu Asn Asn Thr Ser Ile Ser Arg Phe Gly Val Asn Thr
145   150   155   160

Glu Asn Glu Asp His Leu Ala Lys Glu Leu Glu Asp Leu Asn Lys Trp
                165   170   175

Gly Leu Asn Ile Phe Asn Val Ala Gly Tyr Ser His Asn Arg Pro Leu
            180   185   190

Thr Cys Ile Met Tyr Ala Ile Phe Gln Glu Arg Asp Leu Leu Lys Thr
        195   200   205

Phe Arg Ile Ser Ser Asp Thr Phe Ile Thr Tyr Met Met Thr Leu Glu
    210   215   220

Asp His Tyr His Ser Asp Val Ala Tyr His Asn Ser Leu His Ala Ala
225   230   235   240

Asp Val Ala Gln Ser Thr His Val Leu Leu Ser Thr Pro Ala Leu Asp
            245   250   255

1306

```
Ala Val Phe Thr Asp Leu Glu Ile Leu Ala Ala Ile Phe Ala Ala Ala
            260             265             270


Ile His Asp Val Asp His Pro Gly Val Ser Asn Gln Phe Leu Ile Asn
        275             280             285


Thr Asn Ser Glu Leu Ala Leu Met Tyr Asn Asp Glu Ser Val Leu Glu
    290             295             300


Asn His His Leu Ala Val Gly Phe Lys Leu Leu Gln Glu Glu His Cys
305             310             315             320


Asp Ile Phe Met Asn Leu Thr Lys Lys Gln Arg Gln Thr Leu Arg Lys
            325             330             335


Met Val Ile Asp Met Val Leu Ala Thr Asp Met Ser Lys His Met Ser
            340             345             350


Leu Leu Ala Asp Leu Lys Thr Met Val Glu Thr Lys Lys Val Thr Ser
            355             360             365


Ser Gly Val Leu Leu Leu Asp Asn Tyr Thr Asp Arg Ile Gln Val Leu
    370             375             380


Arg Asn Met Val His Cys Ala Asp Leu Ser Asn Pro Thr Lys Ser Leu
385             390             395             400


Glu Leu Tyr Arg Gln Trp Thr Asp Arg Ile Met Glu Glu Phe Phe Gln
            405             410             415


Gln Gly Asp Lys Glu Arg Glu Arg Gly Met Glu Ile Ser Pro Met Cys
            420             425             430


Asp Lys His Thr Ala Ser Val Glu Lys Ser Gln Val Gly Phe Ile Asp
            435             440             445


Tyr Ile Val His Pro Leu Trp Glu Thr Trp Ala Asp Leu Val Gln Pro
    450             455             460


Asp Ala Gln Asp Ile Leu Asp Thr Leu Glu Asp Asn Arg Asn Trp Tyr
465             470             475             480


Gln Ser Met Ile Pro Gln Ser Pro Ser Pro Pro Leu Asp Glu Gln Asn
            485             490             495
```

Arg Asp Cys Gln Gly Leu Met Glu Lys Phe Gln Phe Glu Leu Thr Leu
            500   505   510

Asp Glu Glu Asp Ser Glu Gly Pro Glu Lys Glu Gly Glu Gly His Ser
            515   520   525

Tyr Phe Ser Ser Thr Lys Thr Leu Cys Val Ile Asp Pro Glu Asn Arg
    530   535   540

Asp Ser Leu Gly Glu Thr Asp Ile Asp Ile Ala Thr Glu Asp Lys Ser
545   550   555   560

Pro Val Asp Thr

<210> 2944
<211> 91
<212> PRT
<213> Homo sapiens

<400> 2944

Met Lys Val Ser Ala Ala Ala Leu Ala Val Ile Leu Ile Ala Thr Ala
1   5   10   15

Leu Cys Ala Pro Ala Ser Ala Ser Pro Tyr Ser Ser Asp Thr Thr Pro
            20   25   30

Cys Cys Phe Ala Tyr Ile Ala Arg Pro Leu Pro Arg Ala His Ile Lys
            35   40   45

Glu Tyr Phe Tyr Thr Ser Gly Lys Cys Ser Asn Pro Ala Val Val Phe
    50   55   60

Val Thr Arg Lys Asn Arg Gln Val Cys Ala Asn Pro Glu Lys Lys Trp
65   70   75   80

Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser
                85   90

<210> 2945
<211> 461
<212> PRT
<213> Homo sapiens

<400> 2945

Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu
1   5   10   15

Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr
        20   25   30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln
        35   40   45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys
    50   55   60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp
65   70   75   80

Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys
            85   90   95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg
        100   105   110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu
        115   120   125

Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg
    130   135   140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val
145   150   155   160

Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr
            165   170   175

Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly
            180   185   190

Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser
        195   200   205

Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser
    210   215   220

Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser
225   230   235   240

Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly
            245   250   255

1309

```
Asp Phe Ala Leu Pro Val Gly Leu Ile Val Gly Val Thr Ala Leu Gly
            260             265             270

Leu Leu Ile Ile Gly Val Val Asn Cys Val Ile Met Thr Gln Val Lys
        275             280             285

Lys Lys Pro Leu Cys Leu Gln Arg Glu Ala Lys Val Pro His Leu Pro
    290             295             300

Ala Asp Lys Ala Arg Gly Thr Gln Gly Pro Glu Gln Gln His Leu Leu
305             310             315             320

Ile Thr Ala Pro Ser Ser Ser Ser Ser Ser Leu Glu Ser Ser Ala Ser
            325             330             335

Ala Leu Asp Arg Arg Ala Pro Thr Arg Asn Gln Pro Gln Ala Pro Gly
            340             345             350

Val Glu Ala Ser Gly Ala Gly Glu Ala Arg Ala Ser Thr Gly Ser Ser
        355             360             365

Asp Ser Ser Pro Gly Gly His Gly Thr Gln Val Asn Val Thr Cys Ile
    370             375             380

Val Asn Val Cys Ser Ser Ser Asp His Ser Ser Gln Cys Ser Ser Gln
385             390             395             400

Ala Ser Ser Thr Met Gly Asp Thr Asp Ser Ser Pro Ser Glu Ser Pro
            405             410             415

Lys Asp Glu Gln Val Pro Phe Ser Lys Glu Glu Cys Ala Phe Arg Ser
        420             425             430

Gln Leu Glu Thr Pro Glu Thr Leu Leu Gly Ser Thr Glu Glu Lys Pro
    435             440             445

Leu Pro Leu Gly Val Pro Asp Ala Gly Met Lys Pro Ser
    450             455             460
```

```
<210>  2946
<211>  823
<212>  PRT
<213>  Homo sapiens

<400>  2946
```

```
Met Ser Arg Arg Lys Gln Gly Asn Pro Gln His Leu Ser Gln Arg Glu
1               5               10              15
```

Leu Ile Thr Pro Glu Ala Asp His Val Glu Ala Ala Ile Leu Glu Glu
            20   25   30

Asp Glu Gly Leu Glu Ile Glu Glu Pro Ser Gly Leu Gly Leu Met Val
            35   40   45

Gly Gly Pro Asp Pro Asp Leu Leu Thr Cys Gly Gln Cys Gln Met Asn
        50   55   60

Phe Pro Leu Gly Asp Ile Leu Val Phe Ile Glu His Lys Arg Lys Gln
65   70   75   80

Cys Gly Gly Ser Leu Gly Ala Cys Tyr Asp Lys Ala Leu Asp Lys Asp
                85   90   95

Ser Pro Pro Pro Ser Ser Arg Ser Glu Leu Arg Lys Val Ser Glu Pro
            100   105   110

Val Glu Ile Gly Ile Gln Val Thr Pro Asp Glu Asp Asp His Leu Leu
            115   120   125

Ser Pro Thr Lys Gly Ile Cys Pro Lys Gln Glu Asn Ile Ala Gly Lys
    130   135   140

Asp Glu Pro Ser Ser Tyr Ile Cys Thr Thr Cys Lys Gln Pro Phe Asn
145   150   155   160

Ser Ala Trp Phe Leu Leu Gln His Ala Gln Asn Thr His Gly Phe Arg
            165   170   175

Ile Tyr Leu Glu Pro Gly Pro Ala Ser Ser Ser Leu Thr Pro Arg Leu
        180   185   190

Thr Ile Pro Pro Pro Leu Gly Pro Glu Ala Val Ala Gln Ser Pro Leu
        195   200   205

Met Asn Phe Leu Gly Asp Ser Asn Pro Phe Asn Leu Leu Arg Met Thr
    210   215   220

Gly Pro Ile Leu Arg Asp His Pro Gly Phe Gly Glu Gly Arg Leu Pro
225   230   235   240

Gly Thr Pro Pro Leu Phe Ser Pro Pro Pro Arg His His Leu Asp Pro
            245   250   255

```
His Arg Leu Ser Ala Glu Glu Met Gly Leu Val Ala Gln His Pro Ser
        260                 265                 270

Ala Phe Asp Arg Val Met Arg Leu Asn Pro Met Ala Ile Asp Ser Pro
        275                 280                 285

Ala Met Asp Phe Ser Arg Arg Leu Arg Glu Leu Ala Gly Asn Ser Ser
    290                 295                 300

Thr Pro Pro Pro Val Ser Pro Gly Arg Gly Asn Pro Met His Arg Leu
305                 310                 315                 320

Leu Asn Pro Phe Gln Pro Ser Pro Lys Ser Pro Phe Leu Ser Thr Pro
                325                 330                 335

Pro Leu Pro Pro Met Pro Pro Gly Gly Thr Pro Pro Pro Gln Pro Pro
                340                 345                 350

Ala Lys Ser Lys Ser Cys Glu Phe Cys Gly Lys Thr Phe Lys Phe Gln
        355                 360                 365

Ser Asn Leu Ile Val His Arg Arg Ser His Thr Gly Glu Lys Pro Tyr
    370                 375                 380

Lys Cys Gln Leu Cys Asp His Ala Cys Ser Gln Ala Ser Lys Leu Lys
385                 390                 395                 400

Arg His Met Lys Thr His Met His Lys Ala Gly Ser Leu Ala Gly Arg
                405                 410                 415

Ser Asp Asp Gly Leu Ser Ala Ala Ser Ser Pro Glu Pro Gly Thr Ser
        420                 425                 430

Glu Leu Ala Gly Glu Gly Leu Lys Ala Ala Asp Gly Asp Phe Arg His
        435                 440                 445

His Glu Ser Asp Pro Ser Leu Gly His Glu Pro Glu Glu Glu Asp Glu
    450                 455                 460

Glu Glu Glu Glu Glu Glu Glu Glu Leu Leu Leu Glu Asn Glu Ser Arg
465                 470                 475                 480

Pro Glu Ser Ser Phe Ser Met Asp Ser Glu Leu Ser Arg Asn Arg Glu
                485                 490                 495
```

```
Asn Gly Gly Gly Gly Val Pro Gly Val Pro Gly Ala Gly Gly Gly Ala
        500             505             510

Ala Lys Ala Leu Ala Asp Glu Lys Ala Leu Val Leu Gly Lys Val Met
        515             520             525

Glu Asn Val Gly Leu Gly Ala Leu Pro Gln Tyr Gly Glu Leu Leu Ala
        530             535             540

Asp Lys Gln Lys Arg Gly Ala Phe Leu Lys Arg Ala Ala Gly Gly Gly
545             550             555             560

Asp Ala Gly Asp Asp Asp Ala Gly Gly Cys Gly Asp Ala Gly Ala
        565             570             575

Gly Gly Ala Val Asn Gly Arg Gly Gly Gly Phe Ala Pro Gly Thr Glu
        580             585             590

Pro Phe Pro Gly Leu Phe Pro Arg Lys Pro Ala Pro Leu Pro Ser Pro
        595             600             605

Gly Leu Asn Ser Ala Ala Lys Arg Ile Lys Val Glu Lys Asp Leu Glu
        610             615             620

Leu Pro Pro Ala Ala Leu Ile Pro Ser Glu Asn Val Tyr Ser Gln Trp
625             630             635             640

Leu Val Gly Tyr Ala Ala Ser Arg His Phe Met Lys Asp Pro Phe Leu
            645             650             655

Gly Phe Thr Asp Ala Arg Gln Ser Pro Phe Ala Thr Ser Ser Glu His
        660             665             670

Ser Ser Glu Asn Gly Ser Leu Arg Phe Ser Thr Pro Pro Gly Asp Leu
        675             680             685

Leu Asp Gly Gly Leu Ser Gly Arg Ser Gly Thr Ala Ser Gly Gly Ser
        690             695             700

Thr Pro His Leu Gly Gly Pro Gly Pro Gly Arg Pro Ser Ser Lys Glu
705             710             715             720

Gly Arg Arg Ser Asp Thr Cys Glu Tyr Cys Gly Lys Val Phe Lys Asn
            725             730             735

Cys Ser Asn Leu Thr Val His Arg Arg Ser His Thr Gly Glu Arg Pro
```

```
              740                745                750


Tyr Lys Cys Glu Leu Cys Asn Tyr Ala Cys Ala Gln Ser Ser Lys Leu
        755                760                765


Thr Arg His Met Lys Thr His Gly Gln Ile Gly Lys Glu Val Tyr Arg
        770                775                780


Cys Asp Ile Cys Gln Met Pro Phe Ser Val Tyr Ser Thr Leu Glu Lys
785                 790                795                800


His Met Lys Lys Trp His Gly Glu His Leu Leu Thr Asn Asp Val Lys
                805                810                815


Ile Glu Gln Ala Glu Arg Ser
                820


<210>   2947
<211>   441
<212>   PRT
<213>   Homo sapiens

<400>   2947

Met Val Pro Pro Lys Leu His Val Leu Phe Cys Leu Cys Gly Cys Leu
1                   5                   10                15


Ala Val Val Tyr Pro Phe Asp Trp Gln Tyr Ile Asn Pro Val Ala His
            20                  25                  30


Met Lys Ser Ser Ala Trp Val Asn Lys Ile Gln Val Leu Met Ala Ala
        35                  40                  45


Ala Ser Phe Gly Gln Thr Lys Ile Pro Arg Gly Asn Gly Pro Tyr Ser
        50                  55                  60


Val Gly Cys Thr Asp Leu Met Phe Asp His Thr Asn Lys Gly Thr Phe
65                  70                  75                  80


Leu Arg Leu Tyr Tyr Pro Ser Gln Asp Asn Asp Arg Leu Asp Thr Leu
                85                  90                  95


Trp Ile Pro Asn Lys Glu Tyr Phe Trp Gly Leu Ser Lys Phe Leu Gly
            100                 105                 110


Thr His Trp Leu Met Gly Asn Ile Leu Arg Leu Leu Phe Gly Ser Met
        115                 120                 125
```

Thr Thr Pro Ala Asn Trp Asn Ser Pro Leu Arg Pro Gly Glu Lys Tyr
    130   135   140

Pro Leu Val Val Phe Ser His Gly Leu Gly Ala Phe Arg Thr Leu Tyr
145   150   155   160

Ser Ala Ile Gly Ile Asp Leu Ala Ser His Gly Phe Ile Val Ala Ala
                165   170   175

Val Glu His Arg Asp Arg Ser Ala Ser Ala Thr Tyr Tyr Phe Lys Asp
            180   185   190

Gln Ser Ala Ala Glu Ile Gly Asp Lys Ser Trp Leu Tyr Leu Arg Thr
        195   200   205

Leu Lys Gln Glu Glu Glu Thr His Ile Arg Asn Glu Gln Val Arg Gln
    210   215   220

Arg Ala Lys Glu Cys Ser Gln Ala Leu Ser Leu Ile Leu Asp Ile Asp
225   230   235   240

His Gly Lys Pro Val Lys Asn Ala Leu Asp Leu Lys Phe Asp Met Glu
            245   250   255

Gln Leu Lys Asp Ser Ile Asp Arg Glu Lys Ile Ala Val Ile Gly His
        260   265   270

Ser Phe Gly Gly Ala Thr Val Ile Gln Thr Leu Ser Glu Asp Gln Arg
    275   280   285

Phe Arg Cys Gly Ile Ala Leu Asp Ala Trp Met Phe Pro Leu Gly Asp
    290   295   300

Glu Val Tyr Ser Arg Ile Pro Gln Pro Leu Phe Phe Ile Asn Ser Glu
305   310   315   320

Tyr Phe Gln Tyr Pro Ala Asn Ile Ile Lys Met Lys Lys Cys Tyr Ser
            325   330   335

Pro Asp Lys Glu Arg Lys Met Ile Thr Ile Arg Gly Ser Val His Gln
            340   345   350

Asn Phe Ala Asp Phe Thr Phe Ala Thr Gly Lys Ile Ile Gly His Met
            355   360   365

```
Leu Lys Leu Lys Gly Asp Ile Asp Ser Asn Val Ala Ile Asp Leu Ser
    370                 375                 380

Asn Lys Ala Ser Leu Ala Phe Leu Gln Lys His Leu Gly Leu His Lys
385                 390                 395                 400

Asp Phe Asp Gln Trp Asp Cys Leu Ile Glu Gly Asp Asp Glu Asn Leu
                405                 410                 415

Ile Pro Gly Thr Asn Ile Asn Thr Thr Asn Gln His Ile Met Leu Gln
                420                 425                 430

Asn Ser Ser Gly Ile Glu Lys Tyr Asn
                435                 440
```

```
<210>  2948
<211>  1044
<212>  PRT
<213>  Homo sapiens

<400>  2948
```

```
Met Pro Pro Gly Val Asp Cys Pro Met Glu Phe Trp Thr Lys Glu Glu
1               5                   10                  15

Asn Gln Ser Val Val Val Asp Phe Leu Leu Pro Thr Gly Val Tyr Leu
                20                  25                  30

Asn Phe Pro Val Ser Arg Asn Ala Asn Leu Ser Thr Ile Lys Gln Leu
                35                  40                  45

Leu Trp His Arg Ala Gln Tyr Glu Pro Leu Phe His Met Leu Ser Gly
    50                  55                  60

Pro Glu Ala Tyr Val Phe Thr Cys Ile Asn Gln Thr Ala Glu Gln Gln
65                  70                  75                  80

Glu Leu Glu Asp Glu Gln Arg Arg Leu Cys Asp Val Gln Pro Phe Leu
                85                  90                  95

Pro Val Leu Arg Leu Val Ala Arg Glu Gly Asp Arg Val Lys Lys Leu
                100                 105                 110

Ile Asn Ser Gln Ile Ser Leu Leu Ile Gly Lys Gly Leu His Glu Phe
                115                 120                 125

Asp Ser Leu Cys Asp Pro Glu Val Asn Asp Phe Arg Ala Lys Met Cys
    130                 135                 140
```

1316

```
Gln Phe Cys Glu Glu Ala Ala Ala Arg Arg Gln Gln Leu Gly Trp Glu
145             150             155                 160

Ala Trp Leu Gln Tyr Ser Phe Pro Leu Gln Leu Glu Pro Ser Ala Gln
                165                 170                 175

Thr Trp Gly Pro Gly Thr Leu Arg Leu Pro Asn Arg Ala Leu Leu Val
            180                 185                 190

Asn Val Lys Phe Glu Gly Ser Glu Glu Ser Phe Thr Phe Gln Val Ser
            195                 200                 205

Thr Lys Asp Val Pro Leu Ala Leu Met Ala Cys Ala Leu Arg Lys Lys
        210                 215                 220

Ala Thr Val Phe Arg Gln Pro Leu Val Glu Gln Pro Glu Asp Tyr Thr
225             230                 235                 240

Leu Gln Val Asn Gly Arg His Glu Tyr Leu Tyr Gly Asn Tyr Pro Leu
                245                 250                 255

Cys Gln Phe Gln Tyr Ile Cys Ser Cys Leu His Ser Gly Leu Thr Pro
            260                 265                 270

His Leu Thr Met Val His Ser Ser Ser Ile Leu Ala Met Arg Asp Glu
        275                 280                 285

Gln Ser Asn Pro Ala Pro Gln Val Gln Lys Pro Arg Ala Lys Pro Pro
        290                 295                 300

Pro Ile Pro Ala Lys Lys Pro Ser Ser Val Ser Leu Trp Ser Leu Glu
305                 310                 315                 320

Gln Pro Phe Arg Ile Glu Leu Ile Gln Gly Ser Lys Val Asn Ala Asp
                325                 330                 335

Glu Arg Met Lys Leu Val Val Gln Ala Gly Leu Phe His Gly Asn Glu
            340                 345                 350

Met Leu Cys Lys Thr Val Ser Ser Ser Glu Val Ser Val Cys Ser Glu
            355                 360                 365

Pro Val Trp Lys Gln Arg Leu Glu Phe Asp Ile Asn Ile Cys Asp Leu
    370                 375                 380
```

1317

Pro Arg Met Ala Arg Leu Cys Phe Ala Leu Tyr Ala Val Ile Glu Lys
385   390   395   400

Ala Lys Lys Ala Arg Ser Thr Lys Lys Lys Ser Lys Lys Ala Asp Cys
                405   410   415

Pro Ile Ala Trp Ala Asn Leu Met Leu Phe Asp Tyr Lys Asp Gln Leu
            420   425   430

Lys Thr Gly Glu Arg Cys Leu Tyr Met Trp Pro Ser Val Pro Asp Glu
        435   440   445

Lys Gly Glu Leu Leu Asn Pro Thr Gly Thr Val Arg Ser Asn Pro Asn
    450   455   460

Thr Asp Ser Ala Ala Ala Leu Leu Ile Cys Leu Pro Glu Val Ala Pro
465   470   475   480

His Pro Val Tyr Tyr Pro Ala Leu Glu Lys Ile Leu Glu Leu Gly Arg
                485   490   495

His Ser Glu Cys Val His Val Thr Glu Glu Glu Gln Leu Gln Leu Arg
            500   505   510

Glu Ile Leu Glu Arg Arg Gly Ser Gly Glu Leu Tyr Glu His Glu Lys
        515   520   525

Asp Leu Val Trp Lys Leu Arg His Glu Val Gln Glu His Phe Pro Glu
    530   535   540

Ala Leu Ala Arg Leu Leu Leu Val Thr Lys Trp Asn Lys His Glu Asp
545   550   555   560

Val Ala Gln Met Leu Tyr Leu Leu Cys Ser Trp Pro Glu Leu Pro Val
                565   570   575

Leu Ser Ala Leu Glu Leu Leu Asp Phe Ser Phe Pro Asp Cys His Val
            580   585   590

Gly Ser Phe Ala Ile Lys Ser Leu Arg Lys Leu Thr Asp Asp Glu Leu
            595   600   605

Phe Gln Tyr Leu Leu Gln Leu Val Gln Val Leu Lys Tyr Glu Ser Tyr
    610   615   620

1318

Leu Asp Cys Glu Leu Thr Lys Phe Leu Leu Asp Arg Ala Leu Ala Asn
625   630   635   640

Arg Lys Ile Gly His Phe Leu Phe Trp His Leu Arg Ser Glu Met His
                645   650   655

Val Pro Ser Val Ala Leu Arg Phe Gly Leu Ile Leu Glu Ala Tyr Cys
                660   665   670

Arg Gly Ser Thr His His Met Lys Val Leu Met Lys Gln Gly Glu Ala
          675   680   685

Leu Ser Lys Leu Lys Ala Leu Asn Asp Phe Val Lys Leu Ser Ser Gln
        690   695   700

Lys Thr Pro Lys Pro Gln Thr Lys Glu Leu Met His Leu Cys Met Arg
705   710   715   720

Gln Glu Ala Tyr Leu Glu Ala Leu Ser His Leu Gln Ser Pro Leu Asp
              725   730   735

Pro Ser Thr Leu Leu Ala Glu Val Cys Val Glu Gln Cys Thr Phe Met
          740   745   750

Asp Ser Lys Met Lys Pro Leu Trp Ile Met Tyr Ser Asn Glu Glu Ala
        755   760   765

Gly Ser Gly Gly Ser Val Gly Ile Ile Phe Lys Asn Gly Asp Asp Leu
        770   775   780

Arg Gln Asp Met Leu Thr Leu Gln Met Ile Gln Leu Met Asp Val Leu
785   790   795   800

Trp Lys Gln Glu Gly Leu Asp Leu Arg Met Thr Pro Tyr Gly Cys Leu
          805   810   815

Pro Thr Gly Asp Arg Thr Gly Leu Ile Glu Val Val Leu Arg Ser Asp
        820   825   830

Thr Ile Ala Asn Ile Gln Leu Asn Lys Ser Asn Met Ala Ala Thr Ala
        835   840   845

Ala Phe Asn Lys Asp Ala Leu Leu Asn Trp Leu Lys Ser Lys Asn Pro
850   855   860

Gly Glu Ala Leu Asp Arg Ala Ile Glu Glu Phe Thr Leu Ser Cys Ala

```
865                      870                      875                      880
```

Gly Tyr Cys Val Ala Thr Tyr Val Leu Gly Ile Gly Asp Arg His Ser
                885   890   895

Asp Asn Ile Met Ile Arg Glu Ser Gly Gln Leu Phe His Ile Asp Phe
            900   905   910

Gly His Phe Leu Gly Asn Phe Lys Thr Lys Phe Gly Ile Asn Arg Glu
            915   920   925

Arg Val Pro Phe Ile Leu Thr Tyr Asp Phe Val His Val Ile Gln Gln
    930   935   940

Gly Lys Thr Asn Asn Ser Glu Lys Phe Glu Arg Phe Arg Gly Tyr Cys
945   950   955   960

Glu Arg Ala Tyr Thr Ile Leu Arg Arg His Gly Leu Leu Phe Leu His
            965   970   975

Leu Phe Ala Leu Met Arg Ala Ala Gly Leu Pro Glu Leu Ser Cys Ser
            980   985   990

Lys Asp Ile Gln Tyr Leu Lys Asp Ser Leu Ala Leu Gly Lys Thr Glu
            995   1000   1005

Glu Glu Ala Leu Lys His Phe Arg Val Lys Phe Asn Glu Ala Leu
        1010   1015   1020

Arg Glu Ser Trp Lys Thr Lys Val Asn Trp Leu Ala His Asn Val
        1025   1030   1035

Ser Lys Asp Asn Arg Gln
    1040

```
<210>  2949
<211>  167
<212>  PRT
<213>  Homo sapiens

<400>  2949
```

Met Glu His Ile His Asp Ser Asp Gly Ser Ser Ser Ser Ser His Gln
1   5   10   15

Ser Leu Lys Ser Thr Ala Lys Trp Ala Ala Ser Leu Glu Asn Leu Leu
        20   25   30

Glu Asp Pro Glu Gly Val Lys Arg Phe Arg Glu Phe Leu Lys Lys Glu
         35   40   45

Phe Ser Glu Glu Asn Val Leu Phe Trp Leu Ala Cys Glu Asp Phe Lys
    50   55   60

Lys Met Gln Asp Lys Thr Gln Met Gln Glu Lys Ala Lys Glu Ile Tyr
65   70   75   80

Met Thr Phe Leu Ser Ser Lys Ala Ser Ser Gln Val Asn Val Glu Gly
             85   90   95

Gln Ser Arg Leu Asn Glu Lys Ile Leu Glu Glu Pro His Pro Leu Met
             100   105   110

Phe Gln Lys Leu Gln Asp Gln Ile Phe Asn Leu Met Lys Tyr Asp Ser
         115   120   125

Tyr Ser Arg Phe Leu Lys Ser Asp Leu Phe Leu Lys His Lys Arg Thr
    130   135   140

Glu Glu Glu Glu Glu Asp Leu Pro Asp Ala Gln Thr Ala Ala Lys Arg
145   150   155   160

Ala Ser Arg Ile Tyr Asn Thr
             165

<210> 2950
<211> 263
<212> PRT
<213> Homo sapiens

<400> 2950

Met Val Lys Ile Ala Phe Asn Thr Pro Thr Ala Val Gln Lys Glu Glu
1   5   10   15

Ala Arg Gln Asp Val Glu Ala Leu Leu Ser Arg Thr Val Arg Thr Gln
             20   25   30

Ile Leu Thr Gly Lys Glu Leu Arg Val Ala Thr Gln Glu Lys Glu Gly
         35   40   45

Ser Ser Gly Arg Cys Met Leu Thr Leu Leu Gly Leu Ser Phe Ile Leu
    50   55   60

Ala Gly Leu Ile Val Gly Gly Ala Cys Ile Tyr Lys Tyr Phe Met Pro

```
65                     70                   75                    80
```

Lys Ser Thr Ile Tyr Arg Gly Glu Met Cys Phe Phe Asp Ser Glu Asp
                85   90   95

Pro Ala Asn Ser Leu Arg Gly Gly Glu Pro Asn Phe Leu Pro Val Thr
                100   105   110

Glu Glu Ala Asp Ile Arg Glu Asp Asp Asn Ile Ala Ile Ile Asp Val
                115   120   125

Pro Val Pro Ser Phe Ser Asp Ser Asp Pro Ala Ala Ile Ile His Asp
        130   135   140

Phe Glu Lys Gly Met Thr Ala Tyr Leu Asp Leu Leu Leu Gly Asn Cys
145   150   155   160

Tyr Leu Met Pro Leu Asn Thr Ser Ile Val Met Pro Pro Lys Asn Leu
                165   170   175

Val Glu Leu Phe Gly Lys Leu Ala Ser Gly Arg Tyr Leu Pro Gln Thr
                180   185   190

Tyr Val Val Arg Glu Asp Leu Val Ala Val Glu Glu Ile Arg Asp Val
        195   200   205

Ser Asn Leu Gly Ile Phe Ile Tyr Gln Leu Cys Asn Asn Arg Lys Ser
        210   215   220

Phe Arg Leu Arg Arg Arg Asp Leu Leu Leu Gly Phe Asn Lys Arg Ala
225   230   235   240

Ile Asp Lys Cys Trp Lys Ile Arg His Phe Pro Asn Glu Phe Ile Val
                245   250   255

Glu Thr Lys Ile Cys Gln Glu
                260

<210>   2951
<211>   201
<212>   PRT
<213>   Homo sapiens

<400>   2951

Met Asp Pro Gly Trp Pro Cys Cys Pro Leu Pro Val Ala Phe Leu Ser
1   5   10   15

```
Arg Trp Leu Gln Ser Phe Val Asp Gly Leu Phe Cys Thr Gly Gly Leu
             20              25              30

Leu Arg Gln Arg Thr Cys Lys Phe Ala Gly Ala Ala Ser Gln Ala Pro
             35              40              45

His Ala Pro Ala Phe Leu Arg Ala Arg Gly Glu Pro Gln Asp Pro Leu
    50              55              60

Ser His Pro Arg Val Pro Ala Val Ser Ala Asn Cys Arg Met Trp Lys
65              70              75              80

His Leu Pro Val His Ser Ser Pro Thr Pro Arg Leu Thr Pro Leu Trp
             85              90              95

Lys Leu Gln Ala Arg Trp Leu Leu Pro Gln Leu Val Tyr Leu Gln Gly
        100             105             110

Trp Gly Ser Tyr Ser Leu Leu Arg Pro Ala Ala Leu Ile Ser Met Val
        115             120             125

Leu Leu Ala Arg Glu Phe Leu Tyr Pro Ala Lys Met Ser Val Ser Glu
    130             135             140

Val Cys Ser Ser Gly Leu Ser Ser Pro Leu Leu Glu Gln His Lys Thr
145             150             155             160

Asn Leu Ile Phe Tyr Ala Ser Gly Asp Ile Cys Ser Ala Asn Gly Lys
             165             170             175

Ser Gly Phe Asn Gln Pro Leu Pro Phe Leu Lys Thr Phe Cys Ser Thr
        180             185             190

His Arg Ile Leu Ser Cys Thr Tyr Leu
        195             200
```

```
<210>   2952
<211>   492
<212>   PRT
<213>   Homo sapiens

<400>   2952
```

```
Met Ser Asp Tyr Glu Asn Asp Asp Glu Cys Trp Ser Val Leu Glu Gly
1               5               10              15

Phe Arg Val Thr Leu Thr Ser Val Ile Asp Pro Ser Arg Ile Thr Pro
```

```
              20                  25                  30
```

Tyr Leu Arg Gln Cys Lys Val Leu Asn Pro Asp Asp Glu Glu Gln Val
        35   40   45

Leu Ser Asp Pro Asn Leu Val Ile Arg Lys Arg Lys Val Gly Val Leu
        50   55   60

Leu Asp Ile Leu Gln Arg Thr Gly His Lys Gly Tyr Val Ala Phe Leu
65   70   75   80

Glu Ser Leu Glu Leu Tyr Tyr Pro Gln Leu Tyr Lys Lys Val Thr Gly
                85   90   95

Lys Glu Pro Ala Arg Val Phe Ser Met Ile Ile Asp Ala Ser Gly Glu
            100   105   110

Ser Gly Leu Thr Gln Leu Leu Met Thr Glu Val Met Lys Leu Gln Lys
            115   120   125

Lys Val Gln Asp Leu Thr Ala Leu Leu Ser Ser Lys Asp Asp Phe Ile
    130   135   140

Lys Glu Leu Arg Val Lys Asp Ser Leu Leu Arg Lys His Gln Glu Arg
145   150   155   160

Val Gln Arg Leu Lys Glu Glu Cys Glu Ala Gly Ser Arg Glu Leu Lys
                165   170   175

Arg Cys Lys Glu Glu Asn Tyr Asp Leu Ala Met Arg Leu Ala His Gln
            180   185   190

Ser Glu Glu Lys Gly Ala Ala Leu Met Arg Asn Arg Asp Leu Gln Leu
            195   200   205

Glu Ile Asp Gln Leu Lys His Ser Leu Met Lys Ala Glu Asp Asp Cys
    210   215   220

Lys Val Glu Arg Lys His Thr Leu Lys Leu Arg His Ala Met Glu Gln
225   230   235   240

Arg Pro Ser Gln Glu Leu Leu Trp Glu Leu Gln Gln Glu Lys Ala Leu
            245   250   255

Leu Gln Ala Arg Val Gln Glu Leu Glu Ala Ser Val Gln Glu Gly Lys
            260   265   270

Leu Asp Arg Ser Ser Pro Tyr Ile Gln Val Leu Glu Glu Asp Trp Arg
        275   280   285

Gln Ala Leu Arg Asp His Gln Glu Gln Ala Asn Thr Ile Phe Ser Leu
        290   295   300

Arg Lys Asp Leu Arg Gln Gly Glu Ala Arg Arg Leu Arg Cys Met Glu
305   310   315   320

Glu Lys Glu Met Phe Glu Leu Gln Cys Leu Ala Leu Arg Lys Asp Ser
                325   330   335

Lys Met Tyr Lys Asp Arg Ile Glu Ala Ile Leu Leu Gln Met Glu Glu
                340   345   350

Val Ala Ile Glu Arg Asp Gln Ala Ile Ala Thr Arg Glu Glu Leu His
        355   360   365

Ala Gln His Ala Arg Gly Leu Gln Glu Lys Asp Ala Leu Arg Lys Gln
        370   375   380

Val Arg Glu Leu Gly Glu Lys Ala Asp Glu Leu Gln Leu Gln Val Phe
385   390   395   400

Gln Cys Glu Ala Gln Leu Leu Ala Val Glu Gly Arg Leu Arg Arg Gln
                405   410   415

Gln Leu Glu Thr Leu Val Leu Ser Ser Asp Leu Glu Asp Gly Ser Pro
        420   425   430

Arg Arg Ser Gln Glu Leu Ser Leu Pro Gln Asp Leu Glu Asp Thr Gln
        435   440   445

Leu Ser Asp Lys Gly Cys Leu Ala Gly Gly Gly Ser Pro Lys Gln Pro
    450   455   460

Phe Ala Ala Leu His Gln Glu Gln Val Leu Arg Asn Pro His Asp Ala
465   470   475   480

Gly Pro Ala Gly Leu Pro Gly Ile Gly Ala Val Cys
                485   490

<210> 2953
<211> 92
<212> PRT

```
<213>    Homo sapiens

<400>    2953

Met Lys Leu Cys Val Thr Val Leu Ser Leu Leu Met Leu Val Ala Ala
1               5                   10                  15


Phe Cys Ser Pro Ala Leu Ser Ala Pro Met Gly Ser Asp Pro Pro Thr
            20                  25                  30


Ala Cys Cys Phe Ser Tyr Thr Ala Arg Lys Leu Pro Arg Asn Phe Val
        35                  40                  45


Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val Val
    50                  55                  60


Phe Gln Thr Lys Arg Ser Lys Gln Val Cys Ala Asp Pro Ser Glu Ser
65                  70                  75                  80


Trp Val Gln Glu Tyr Val Tyr Asp Leu Glu Leu Asn
                85                  90


<210>    2954
<211>    266
<212>    PRT
<213>    Homo sapiens

<400>    2954

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Cys Met Thr Ala Leu Thr
1               5                   10                  15


Val Thr Leu Met Val Leu Ser Ser Pro Leu Ala Leu Ala Gly Asp Thr
            20                  25                  30


Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn
        35                  40                  45


Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu
    50                  55                  60


Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr
65                  70                  75                  80


Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu
                85                  90                  95


Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr
            100                 105                 110
```

```
Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu Pro Lys Val
        115                 120                 125

Thr Val Tyr Pro Ser Lys Thr Gln Pro Leu Gln His His Asn Leu Leu
        130                 135                 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp
145                 150                 155                 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu
                165                 170                 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr
                180                 185                 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser
        195                 200                 205

Val Thr Ser Pro Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala
        210                 215                 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu
225                 230                 235                 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His
                245                 250                 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser
                260                 265
```

```
<210> 2955
<211> 359
<212> PRT
<213> Homo sapiens

<400> 2955
```

```
Met Ala Glu Ala Ile Thr Tyr Ala Asp Leu Arg Phe Val Lys Ala Pro
1               5                   10                  15

Leu Lys Lys Ser Ile Ser Ser Arg Leu Gly Gln Asp Pro Gly Ala Asp
                20                  25                  30

Asp Asp Gly Glu Ile Thr Tyr Glu Asn Val Gln Val Pro Ala Val Leu
        35                  40                  45
```

```
Gly Val Pro Ser Ser Leu Ala Ser Ser Val Leu Gly Asp Lys Ala Ala
    50              55              60


Val Lys Ser Glu Gln Pro Thr Ala Ser Trp Arg Ala Val Thr Ser Pro
65              70              75              80


Ala Val Gly Arg Ile Leu Pro Cys Arg Thr Thr Cys Leu Arg Tyr Leu
            85              90              95


Leu Leu Gly Leu Leu Leu Thr Cys Leu Leu Gly Val Thr Ala Ile
            100             105             110


Cys Leu Gly Val Arg Tyr Leu Gln Val Ser Gln Gln Leu Gln Gln Thr
            115             120             125


Asn Arg Val Leu Glu Val Thr Asn Ser Ser Leu Arg Gln Gln Leu Arg
    130             135             140


Leu Lys Ile Thr Gln Leu Gly Gln Ser Ala Glu Asp Leu Gln Gly Ser
145             150             155             160


Arg Arg Glu Leu Ala Gln Ser Gln Glu Ala Leu Gln Val Glu Gln Arg
            165             170             175


Ala His Gln Ala Ala Glu Gly Gln Leu Gln Ala Cys Gln Ala Asp Arg
            180             185             190


Gln Lys Thr Lys Glu Thr Leu Gln Ser Glu Glu Gln Gln Arg Arg Ala
            195             200             205


Leu Glu Gln Lys Leu Ser Asn Met Glu Asn Arg Leu Lys Pro Phe Phe
    210             215             220


Thr Cys Gly Ser Ala Asp Thr Cys Cys Pro Ser Gly Trp Ile Met His
225             230             235             240


Gln Lys Ser Cys Phe Tyr Ile Ser Leu Thr Ser Lys Asn Trp Gln Glu
            245             250             255


Ser Gln Lys Gln Cys Glu Thr Leu Ser Ser Lys Leu Ala Thr Phe Ser
            260             265             270


Glu Ile Tyr Pro Gln Ser His Ser Tyr Tyr Phe Leu Asn Ser Leu Leu
            275             280             285


Pro Asn Gly Gly Ser Gly Asn Ser Tyr Trp Thr Gly Leu Ser Ser Asn
```

```
            290                  295                      300


Lys Asp Trp Lys Leu Thr Asp Asp Thr Gln Arg Thr Arg Thr Tyr Ala
305                 310             315                     320


Gln Ser Ser Lys Cys Asn Lys Val His Lys Thr Trp Ser Trp Trp Thr
                325                 330                 335


Leu Glu Ser Glu Ser Cys Arg Ser Ser Leu Pro Tyr Ile Cys Glu Met
            340                 345                 350


Thr Ala Phe Arg Phe Pro Asp
        355
```

```
<210>   2956
<211>   643
<212>   PRT
<213>   Homo sapiens

<400>   2956
```

```
Met Gln Ala Pro Arg Glu Leu Ala Val Gly Ile Asp Leu Gly Thr Thr
1               5                   10                  15


Tyr Ser Cys Val Gly Val Phe Gln Gln Gly Arg Val Glu Ile Leu Ala
                20                  25                  30


Asn Asp Gln Gly Asn Arg Thr Thr Pro Ser Tyr Val Ala Phe Thr Asp
            35                  40                  45


Thr Glu Arg Leu Val Gly Asp Ala Ala Lys Ser Gln Ala Ala Leu Asn
    50                  55                  60


Pro His Asn Thr Val Phe Asp Ala Lys Arg Leu Ile Gly Arg Lys Phe
65                  70                  75                      80


Ala Asp Thr Thr Val Gln Ser Asp Met Lys His Trp Pro Phe Arg Val
                85                  90                  95


Val Ser Glu Gly Gly Lys Pro Lys Val Pro Val Ser Tyr Arg Gly Glu
                100                 105                 110


Asp Lys Thr Phe Tyr Pro Glu Glu Ile Ser Ser Met Val Leu Ser Lys
            115                 120                 125


Met Lys Glu Thr Ala Glu Ala Tyr Leu Gly Gln Pro Val Lys His Ala
        130                 135                 140
```

Val Ile Thr Val Pro Ala Tyr Phe Asn Asp Ser Gln Arg Gln Ala Thr
145   150   155   160

Lys Asp Ala Gly Ala Ile Ala Gly Leu Asn Val Leu Arg Ile Ile Asn
                    165   170   175

Glu Pro Thr Ala Ala Ala Ile Ala Tyr Gly Leu Asp Arg Arg Gly Ala
                    180   185   190

Gly Glu Arg Asn Val Leu Ile Phe Asp Leu Gly Gly Gly Thr Phe Asp
                195   200   205

Val Ser Val Leu Ser Ile Asp Ala Gly Val Phe Glu Val Lys Ala Thr
            210   215   220

Ala Gly Asp Thr His Leu Gly Gly Glu Asp Phe Asp Asn Arg Leu Val
225   230   235   240

Asn His Phe Met Glu Glu Phe Arg Arg Lys His Gly Lys Asp Leu Ser
                245   250   255

Gly Asn Lys Arg Ala Leu Gly Arg Leu Arg Thr Ala Cys Glu Arg Ala
                260   265   270

Lys Arg Thr Leu Ser Ser Ser Thr Gln Ala Thr Leu Glu Ile Asp Ser
                275   280   285

Leu Phe Glu Gly Val Asp Phe Tyr Thr Ser Ile Thr Arg Ala Arg Phe
            290   295   300

Glu Glu Leu Cys Ser Asp Leu Phe Arg Ser Thr Leu Glu Pro Val Glu
305   310   315   320

Lys Ala Leu Arg Asp Ala Lys Leu Asp Lys Ala Gln Ile His Asp Val
                325   330   335

Val Leu Val Gly Gly Ser Thr Arg Ile Pro Lys Val Gln Lys Leu Leu
                340   345   350

Gln Asp Phe Phe Asn Gly Lys Glu Leu Asn Lys Ser Ile Asn Pro Asp
                355   360   365

Glu Ala Val Ala Tyr Gly Ala Ala Val Gln Ala Ala Val Leu Met Gly
370   375   380

1330

Asp Lys Cys Glu Lys Val Gln Asp Leu Leu Leu Leu Asp Val Ala Pro
385   390   395   400

Leu Ser Leu Gly Leu Glu Thr Ala Gly Gly Val Met Thr Thr Leu Ile
            405   410   415

Gln Arg Asn Ala Thr Ile Pro Thr Lys Gln Thr Gln Thr Phe Thr Thr
            420   425   430

Tyr Ser Asp Asn Gln Pro Gly Val Phe Ile Gln Val Tyr Glu Gly Glu
            435   440   445

Arg Ala Met Thr Lys Asp Asn Asn Leu Leu Gly Arg Phe Glu Leu Ser
    450   455   460

Gly Ile Pro Pro Ala Pro Arg Gly Val Pro Gln Ile Glu Val Thr Phe
465   470   475   480

Asp Ile Asp Ala Asn Gly Ile Leu Ser Val Thr Ala Thr Asp Arg Ser
            485   490   495

Thr Gly Lys Ala Asn Lys Ile Thr Ile Thr Asn Asp Lys Gly Arg Leu
            500   505   510

Ser Lys Glu Glu Val Glu Arg Met Val His Glu Ala Glu Gln Tyr Lys
    515   520   525

Ala Glu Asp Glu Ala Gln Arg Asp Arg Val Ala Ala Lys Asn Ser Leu
    530   535   540

Glu Ala His Val Phe His Val Lys Gly Ser Leu Gln Glu Glu Ser Leu
545   550   555   560

Arg Asp Lys Ile Pro Glu Glu Asp Arg Arg Lys Met Gln Asp Lys Cys
            565   570   575

Arg Glu Val Leu Ala Trp Leu Glu His Asn Gln Leu Ala Glu Lys Glu
            580   585   590

Glu Tyr Glu His Gln Lys Arg Glu Leu Glu Gln Ile Cys Arg Pro Ile
    595   600   605

Phe Ser Arg Leu Tyr Gly Gly Pro Gly Val Pro Gly Gly Ser Ser Cys
    610   615   620

Gly Thr Gln Ala Arg Gln Gly Asp Pro Ser Thr Gly Pro Ile Ile Glu

```
625                    630              635                640



Glu Val Asp



<210>  2957
<211>  565
<212>  PRT
<213>  Homo sapiens

<400>  2957

Met Ala Glu Gly Lys Ala Gly Gly Ala Ala Gly Leu Phe Ala Lys Gln
1                5                   10                  15


Val Gln Lys Lys Phe Ser Arg Ala Gln Glu Lys Val Leu Gln Lys Leu
            20                  25                  30


Gly Lys Ala Val Glu Thr Lys Asp Glu Arg Phe Glu Gln Ser Ala Asn
            35                  40                  45


Asn Phe Tyr Gln Gln Gln Ala Glu Gly His Lys Leu Tyr Lys Asp Leu
    50                  55                  60


Lys Asn Phe Leu Ser Ala Val Lys Val Met His Glu Ser Ser Lys Arg
65                  70                  75                  80


Val Ser Glu Thr Leu Gln Glu Ile Tyr Ser Ser Glu Trp Asp Gly His
                85                  90                  95


Glu Glu Leu Lys Ala Ile Val Trp Asn Asn Asp Leu Leu Trp Glu Asp
            100                 105                 110


Tyr Glu Glu Lys Leu Ala Asp Gln Ala Val Arg Thr Met Glu Ile Tyr
            115                 120                 125


Val Ala Gln Phe Ser Glu Ile Lys Glu Arg Ile Ala Lys Arg Gly Arg
    130                 135                 140


Lys Leu Val Asp Tyr Asp Ser Ala Arg His His Leu Glu Ala Val Gln
145                 150                 155                 160


Asn Ala Lys Lys Lys Asp Glu Ala Lys Thr Ala Lys Ala Glu Glu Glu
                165                 170                 175


Phe Asn Lys Ala Gln Thr Val Phe Glu Asp Leu Asn Gln Glu Leu Leu
            180                 185                 190
```

```
Glu Glu Leu Pro Ile Leu Tyr Asn Ser Arg Ile Gly Cys Tyr Val Thr
        195             200             205

Ile Phe Gln Asn Ile Ser Asn Leu Arg Asp Val Phe Tyr Arg Glu Met
        210             215             220

Ser Lys Leu Asn His Asn Leu Tyr Glu Val Met Ser Lys Leu Glu Lys
225             230             235             240

Gln His Ser Asn Lys Val Phe Val Val Lys Gly Leu Ser Ser Ser Ser
            245             250             255

Arg Arg Ser Leu Val Ile Ser Pro Pro Val Arg Thr Ala Thr Val Ser
        260             265             270

Ser Pro Leu Thr Ser Pro Thr Ser Pro Ser Thr Leu Ser Leu Lys Ser
        275             280             285

Glu Ser Glu Ser Val Ser Ala Thr Glu Asp Leu Ala Pro Asp Ala Ala
        290             295             300

Gln Gly Glu Asp Asn Ser Glu Ile Lys Glu Leu Leu Glu Glu Glu Glu
305             310             315             320

Ile Glu Lys Glu Gly Ser Glu Ala Ser Ser Glu Glu Asp Glu Pro
            325             330             335

Leu Pro Ala Cys Asn Gly Pro Ala Gln Ala Gln Pro Ser Pro Thr Thr
            340             345             350

Glu Arg Ala Lys Ser Gln Glu Glu Val Leu Pro Ser Ser Thr Thr Pro
        355             360             365

Ser Pro Gly Gly Ala Leu Ser Pro Ser Gly Gln Pro Ser Ser Ser Ala
        370             375             380

Thr Glu Val Val Leu Arg Thr Arg Thr Ala Ser Glu Gly Ser Glu Gln
385             390             395             400

Pro Lys Lys Arg Ala Ser Ile Gln Arg Thr Ser Ala Pro Pro Ser Arg
            405             410             415

Pro Pro Pro Pro Arg Ala Thr Ala Ser Pro Arg Pro Ser Ser Gly Asn
            420             425             430
```

```
Ile Pro Ser Ser Pro Thr Ala Ser Gly Gly Gly Ser Pro Thr Ser Pro
        435             440             445

Arg Ala Ser Leu Gly Thr Gly Thr Ala Ser Pro Arg Thr Ser Leu Glu
    450             455             460

Val Ser Pro Asn Pro Glu Pro Pro Glu Lys Pro Val Arg Thr Pro Glu
465             470             475             480

Ala Lys Glu Asn Glu Asn Ile His Asn Gln Asn Pro Glu Glu Leu Cys
            485             490             495

Thr Ser Pro Thr Leu Met Thr Ser Gln Val Ala Ser Glu Pro Gly Glu
        500             505             510

Ala Lys Lys Met Glu Asp Lys Glu Lys Asp Asn Lys Leu Ile Ser Ala
        515             520             525

Asp Ser Ser Glu Gly Gln Asp Gln Leu Gln Val Ser Met Val Pro Glu
    530             535             540

Asn Asn Asn Leu Thr Ala Pro Glu Pro Gln Glu Glu Val Ser Thr Ser
545             550             555             560

Glu Asn Pro Gln Leu
                565


<210>   2958
<211>   349
<212>   PRT
<213>   Homo sapiens

<400>   2958

Met Glu Thr Pro Pro Val Asn Thr Ile Gly Glu Lys Asp Thr Ser Gln
1               5               10              15

Pro Gln Gln Glu Trp Glu Lys Asn Leu Arg Glu Asn Leu Asp Ser Val
            20              25              30

Ile Gln Ile Arg Gln Gln Pro Arg Asp Pro Pro Thr Glu Thr Leu Glu
        35              40              45

Leu Glu Val Ser Pro Asp Pro Ala Ser Gln Ile Leu Glu His Thr Gln
    50              55              60

Gly Ala Glu Lys Leu Val Ala Glu Leu Glu Gly Asp Ser His Lys Ser
65              70              75              80
```

```
His Gly Ser Thr Ser Gln Met Pro Glu Ala Leu Gln Ala Ser Asp Leu
                85                  90                  95


Trp Tyr Cys Pro Asp Gly Ser Phe Val Lys Lys Ile Val Ile Arg Gly
                100                 105                 110


His Gly Leu Asp Lys Pro Lys Leu Gly Ser Cys Cys Arg Val Leu Ala
                115                 120                 125


Leu Gly Phe Pro Phe Gly Ser Gly Pro Pro Glu Gly Trp Thr Glu Leu
                130                 135                 140


Thr Met Gly Val Gly Pro Trp Arg Glu Glu Thr Trp Gly Glu Leu Ile
145                 150                 155                 160


Glu Lys Cys Leu Glu Ser Met Cys Gln Gly Glu Glu Ala Glu Leu Gln
                165                 170                 175


Leu Pro Gly His Ser Gly Pro Pro Val Arg Leu Thr Leu Ala Ser Phe
                180                 185                 190


Thr Gln Gly Arg Asp Ser Trp Glu Leu Glu Thr Ser Glu Lys Glu Ala
                195                 200                 205


Leu Ala Arg Glu Glu Arg Ala Arg Gly Thr Glu Leu Phe Arg Ala Gly
210                 215                 220


Asn Pro Glu Gly Ala Ala Arg Cys Tyr Gly Arg Ala Leu Arg Leu Leu
225                 230                 235                 240


Leu Thr Leu Pro Pro Pro Gly Pro Pro Glu Arg Thr Val Leu His Ala
                245                 250                 255


Asn Leu Ala Ala Cys Gln Leu Leu Leu Gly Gln Pro Gln Leu Ala Ala
                260                 265                 270


Gln Ser Cys Asp Arg Val Leu Glu Arg Glu Pro Gly His Leu Lys Ala
                275                 280                 285


Leu Tyr Arg Arg Gly Val Ala Gln Ala Ala Leu Gly Asn Leu Glu Lys
                290                 295                 300


Ala Thr Ala Asp Leu Lys Lys Val Leu Ala Ile Asp Pro Lys Asn Arg
305                 310                 315                 320
```

```
Ala Ala Gln Glu Glu Leu Gly Lys Val Val Ile Gln Gly Lys Asn Gln
            325                 330                 335

Asp Ala Gly Leu Ala Gln Gly Leu Arg Lys Met Phe Gly
            340                 345
```

```
<210>  2959
<211>  620
<212>  PRT
<213>  Homo sapiens

<400>  2959
```

```
Met Asn Asn Phe Ile Leu Leu Glu Glu Gln Leu Ile Lys Lys Ser Gln
1               5                   10                  15

Gln Lys Arg Arg Thr Ser Pro Ser Asn Phe Lys Val Arg Phe Phe Val
            20                  25                  30

Leu Thr Lys Ala Ser Leu Ala Tyr Phe Glu Asp Arg His Gly Lys Lys
            35                  40                  45

Arg Thr Leu Lys Gly Ser Ile Glu Leu Ser Arg Ile Lys Cys Val Glu
            50                  55                  60

Ile Val Lys Ser Asp Ile Ser Ile Pro Cys His Tyr Lys Tyr Pro Phe
65                  70                  75                  80

Gln Val Val His Asp Asn Tyr Leu Leu Tyr Val Phe Ala Pro Asp Arg
                85                  90                  95

Glu Ser Arg Gln Arg Trp Val Leu Ala Leu Lys Glu Glu Thr Arg Asn
            100                 105                 110

Asn Asn Ser Leu Val Pro Lys Tyr His Pro Asn Phe Trp Met Asp Gly
            115                 120                 125

Lys Trp Arg Cys Cys Ser Gln Leu Glu Lys Leu Ala Thr Gly Cys Ala
    130                 135                 140

Gln Tyr Asp Pro Thr Lys Asn Ala Ser Lys Lys Pro Leu Pro Pro Thr
145                 150                 155                 160

Pro Glu Asp Asn Arg Arg Pro Leu Trp Glu Pro Glu Glu Thr Val Val
                165                 170                 175

Ile Ala Leu Tyr Asp Tyr Gln Thr Asn Asp Pro Gln Glu Leu Ala Leu
```

```
              180                    185                        190


    Arg Arg Asn Glu Glu Tyr Cys Leu Leu Asp Ser Ser Glu Ile His Trp
            195                 200                 205


    Trp Arg Val Gln Asp Arg Asn Gly His Glu Gly Tyr Val Pro Ser Ser
        210                 215                 220


    Tyr Leu Val Glu Lys Ser Pro Asn Asn Leu Glu Thr Tyr Glu Trp Tyr
    225                 230                 235                 240


    Asn Lys Ser Ile Ser Arg Asp Lys Ala Glu Lys Leu Leu Leu Asp Thr
                245                 250                 255


    Gly Lys Glu Gly Ala Phe Met Val Arg Asp Ser Arg Thr Ala Gly Thr
                260                 265                 270


    Tyr Thr Val Ser Val Phe Thr Lys Ala Val Val Ser Glu Asn Asn Pro
                275                 280                 285


    Cys Ile Lys His Tyr His Ile Lys Glu Thr Asn Asp Asn Pro Lys Arg
            290                 295                 300


    Tyr Tyr Val Ala Glu Lys Tyr Val Phe Asp Ser Ile Pro Leu Leu Ile
    305                 310                 315                 320


    Asn Tyr His Gln His Asn Gly Gly Gly Leu Val Thr Arg Leu Arg Tyr
                325                 330                 335


    Pro Val Cys Phe Gly Arg Gln Lys Ala Pro Val Thr Ala Gly Leu Arg
                340                 345                 350


    Tyr Gly Lys Trp Val Ile Asp Pro Ser Glu Leu Thr Phe Val Gln Glu
            355                 360                 365


    Ile Gly Ser Gly Gln Phe Gly Leu Val His Leu Gly Tyr Trp Leu Asn
        370                 375                 380


    Lys Asp Lys Val Ala Ile Lys Thr Ile Arg Glu Gly Ala Met Ser Glu
    385                 390                 395                 400


    Glu Asp Phe Ile Glu Glu Ala Glu Val Met Met Lys Leu Ser His Pro
                405                 410                 415


    Lys Leu Val Gln Leu Tyr Gly Val Cys Leu Glu Gln Ala Pro Ile Cys
                420                 425                 430
```

1337

Leu Val Phe Glu Phe Met Glu His Gly Cys Leu Ser Asp Tyr Leu Arg
        435   440   445

Thr Gln Arg Gly Leu Phe Ala Ala Glu Thr Leu Leu Gly Met Cys Leu
        450   455   460

Asp Val Cys Glu Gly Met Ala Tyr Leu Glu Glu Ala Cys Val Ile His
465   470   475   480

Arg Asp Leu Ala Ala Arg Asn Cys Leu Val Gly Glu Asn Gln Val Ile
                485   490   495

Lys Val Ser Asp Phe Gly Met Thr Arg Phe Val Leu Asp Asp Gln Tyr
        500   505   510

Thr Ser Ser Thr Gly Thr Lys Phe Pro Val Lys Trp Ala Ser Pro Glu
        515   520   525

Val Phe Ser Phe Ser Arg Tyr Ser Ser Lys Ser Asp Val Trp Ser Phe
        530   535   540

Gly Val Leu Met Trp Glu Val Phe Ser Glu Gly Lys Ile Pro Tyr Glu
545   550   555   560

Asn Arg Ser Asn Ser Glu Val Val Glu Asp Ile Ser Thr Gly Phe Arg
                565   570   575

Leu Tyr Lys Pro Arg Leu Ala Ser Thr His Val Tyr Gln Ile Met Asn
        580   585   590

His Cys Trp Lys Glu Arg Pro Glu Asp Arg Pro Ala Phe Ser Arg Leu
        595   600   605

Leu Arg Gln Leu Ala Glu Ile Ala Glu Ser Gly Leu
        610   615   620

<210> 2960
<211> 262
<212> PRT
<213> Homo sapiens

<400> 2960

Met Asp Pro Arg Leu Ser Thr Val Arg Gln Thr Cys Cys Cys Phe Asn
1   5   10   15

Val Arg Ile Ala Thr Thr Ala Leu Ala Ile Tyr His Val Ile Met Ser
        20   25   30

Val Leu Leu Phe Ile Glu His Ser Val Glu Val Ala His Gly Lys Ala
        35   40   45

Ser Cys Lys Leu Ser Gln Met Gly Tyr Leu Arg Ile Ala Asp Leu Ile
    50   55   60

Ser Ser Phe Leu Leu Ile Thr Met Leu Phe Ile Ile Ser Leu Ser Leu
65   70   75   80

Leu Ile Gly Val Val Lys Asn Arg Glu Lys Tyr Leu Leu Pro Phe Leu
                85   90   95

Ser Leu Gln Ile Met Asp Tyr Leu Leu Cys Leu Leu Thr Leu Leu Gly
        100   105   110

Ser Tyr Ile Glu Leu Pro Ala Tyr Leu Lys Leu Ala Ser Arg Ser Arg
        115   120   125

Ala Ser Ser Ser Lys Phe Pro Leu Met Thr Leu Gln Leu Leu Asp Phe
    130   135   140

Cys Leu Ser Ile Leu Thr Leu Cys Ser Ser Tyr Met Glu Val Pro Thr
145   150   155   160

Tyr Leu Asn Phe Lys Ser Met Asn His Met Asn Tyr Leu Pro Ser Gln
                165   170   175

Glu Asp Met Pro His Asn Gln Phe Ile Lys Met Met Ile Ile Phe Ser
            180   185   190

Ile Ala Phe Ile Thr Val Leu Ile Phe Lys Val Tyr Met Phe Lys Cys
        195   200   205

Val Trp Arg Cys Tyr Arg Leu Ile Lys Cys Met Asn Ser Val Glu Glu
    210   215   220

Lys Arg Asn Ser Lys Met Leu Gln Lys Val Val Leu Pro Ser Tyr Glu
225   230   235   240

Glu Ala Leu Ser Leu Pro Ser Lys Thr Pro Glu Gly Gly Pro Ala Pro
            245   250   255

Pro Pro Tyr Ser Glu Val

```
<210>  2961
<211>  467
<212>  PRT
<213>  Homo sapiens

<400>  2961
```

Met Gln Met Asp Asn Arg Leu Pro Pro Lys Lys Val Pro Gly Phe Cys
1   5   10   15

Ser Phe Arg Tyr Gly Leu Ser Phe Leu Val His Cys Cys Asn Val Ile
            20   25   30

Ile Thr Ala Gln Arg Ala Cys Leu Asn Leu Thr Met Val Val Met Val
        35   40   45

Asn Ser Thr Asp Pro His Gly Leu Pro Asn Thr Ser Thr Lys Lys Leu
    50   55   60

Leu Asp Asn Ile Lys Asn Pro Met Tyr Asn Trp Ser Pro Asp Ile Gln
65   70   75   80

Gly Ile Ile Leu Ser Ser Thr Ser Tyr Gly Val Ile Ile Ile Gln Val
            85   90   95

Pro Val Gly Tyr Phe Ser Gly Ile Tyr Ser Thr Lys Lys Met Ile Gly
            100   105   110

Phe Ala Leu Cys Leu Ser Ser Val Leu Ser Leu Leu Ile Pro Pro Ala
            115   120   125

Ala Gly Ile Gly Val Ala Trp Val Val Val Cys Arg Ala Val Gln Gly
    130   135   140

Ala Ala Gln Gly Ile Val Ala Thr Ala Gln Phe Glu Ile Tyr Val Lys
145   150   155   160

Trp Ala Pro Pro Leu Glu Arg Gly Arg Leu Thr Ser Met Ser Thr Ser
            165   170   175

Gly Phe Leu Leu Gly Pro Phe Ile Val Leu Leu Val Thr Gly Val Ile
            180   185   190

Cys Glu Ser Leu Gly Trp Pro Met Val Phe Tyr Ile Phe Gly Ala Cys
    195   200   205

```
Gly Cys Ala Val Cys Leu Leu Trp Phe Val Leu Phe Tyr Asp Asp Pro
    210             215                 220

Lys Asp His Pro Cys Ile Ser Ile Ser Glu Lys Glu Tyr Ile Thr Ser
225             230                 235                 240

Ser Leu Val Gln Gln Val Ser Ser Ser Arg Gln Ser Leu Pro Ile Lys
            245                 250                 255

Ala Ile Leu Lys Ser Leu Pro Val Trp Ala Ile Ser Ile Gly Ser Phe
        260                 265                 270

Thr Phe Phe Trp Ser His Asn Ile Met Thr Leu Tyr Thr Pro Met Phe
        275                 280                 285

Ile Asn Ser Met Leu His Val Asn Ile Lys Glu Asn Gly Phe Leu Ser
    290                 295                 300

Ser Leu Pro Tyr Leu Phe Ala Trp Ile Cys Gly Asn Leu Ala Gly Gln
305             310                 315                 320

Leu Ser Asp Phe Phe Leu Thr Arg Asn Ile Leu Ser Val Ile Ala Val
            325                 330                 335

Arg Lys Leu Phe Thr Ala Ala Gly Phe Leu Leu Pro Ala Ile Phe Gly
        340                 345                 350

Val Cys Leu Pro Tyr Leu Ser Ser Thr Phe Tyr Ser Ile Val Ile Phe
        355                 360                 365

Leu Ile Leu Ala Gly Ala Thr Gly Ser Phe Cys Leu Gly Gly Val Phe
    370                 375                 380

Ile Asn Gly Leu Asp Ile Ala Pro Arg Tyr Phe Gly Phe Ile Lys Ala
385             390                 395                 400

Cys Ser Thr Leu Thr Gly Met Ile Gly Gly Leu Ile Ala Ser Thr Leu
            405                 410                 415

Thr Gly Leu Ile Leu Lys Gln Asp Pro Glu Ser Ala Trp Phe Lys Thr
        420                 425                 430

Phe Ile Leu Met Ala Ala Ile Asn Val Thr Gly Leu Ile Phe Tyr Leu
    435                 440                 445
```

1341

```
Ile Val Ala Thr Ala Glu Ile Gln Asp Trp Ala Lys Glu Lys Gln His
    450                     455                 460


Thr Arg Leu
465


<210>   2962
<211>   444
<212>   PRT
<213>   Homo sapiens

<400>   2962

Met Val Ser Gln Ala Leu Arg Leu Leu Cys Leu Leu Leu Gly Leu Gln
1               5                   10                  15


Gly Cys Leu Ala Ala Val Phe Val Thr Gln Glu Glu Ala His Gly Val
            20                  25                  30


Leu His Arg Arg Arg Arg Ala Asn Ala Phe Leu Glu Glu Leu Arg Pro
            35                  40                  45


Gly Ser Leu Glu Arg Glu Cys Lys Glu Glu Gln Cys Ser Phe Glu Glu
    50                  55                  60


Ala Arg Glu Ile Phe Lys Asp Ala Glu Arg Thr Lys Leu Phe Trp Ile
65                  70                  75                  80


Ser Tyr Ser Asp Gly Asp Gln Cys Ala Ser Ser Pro Cys Gln Asn Gly
                85                  90                  95


Gly Ser Cys Lys Asp Gln Leu Gln Ser Tyr Ile Cys Phe Cys Leu Pro
            100                 105                 110


Ala Phe Glu Gly Arg Asn Cys Glu Thr His Lys Asp Asp Gln Leu Ile
            115                 120                 125


Cys Val Asn Glu Asn Gly Gly Cys Glu Gln Tyr Cys Ser Asp His Thr
    130                 135                 140


Gly Thr Lys Arg Ser Cys Arg Cys His Glu Gly Tyr Ser Leu Leu Ala
145                 150                 155                 160


Asp Gly Val Ser Cys Thr Pro Thr Val Glu Tyr Pro Cys Gly Lys Ile
                165                 170                 175


Pro Ile Leu Glu Lys Arg Asn Ala Ser Lys Pro Gln Gly Arg Ile Val
            180                 185                 190
```

1342

Gly Gly Lys Val Cys Pro Lys Gly Glu Cys Pro Trp Gln Val Leu Leu
        195   200   205

Leu Val Asn Gly Ala Gln Leu Cys Gly Gly Thr Leu Ile Asn Thr Ile
        210   215   220

Trp Val Val Ser Ala Ala His Cys Phe Asp Lys Ile Lys Asn Trp Arg
225   230   235   240

Asn Leu Ile Ala Val Leu Gly Glu His Asp Leu Ser Glu His Asp Gly
                245   250   255

Asp Glu Gln Ser Arg Arg Val Ala Gln Val Ile Ile Pro Ser Thr Tyr
            260   265   270

Val Pro Gly Thr Thr Asn His Asp Ile Ala Leu Leu Arg Leu His Gln
        275   280   285

Pro Val Val Leu Thr Asp His Val Val Pro Leu Cys Leu Pro Glu Arg
    290   295   300

Thr Phe Ser Glu Arg Thr Leu Ala Phe Val Arg Phe Ser Leu Val Ser
305   310   315   320

Gly Trp Gly Gln Leu Leu Asp Arg Gly Ala Thr Ala Leu Glu Leu Met
                325   330   335

Val Leu Asn Val Pro Arg Leu Met Thr Gln Asp Cys Leu Gln Gln Ser
                340   345   350

Arg Lys Val Gly Asp Ser Pro Asn Ile Thr Glu Tyr Met Phe Cys Ala
            355   360   365

Gly Tyr Ser Asp Gly Ser Lys Asp Ser Cys Lys Gly Asp Ser Gly Gly
    370   375   380

Pro His Ala Thr His Tyr Arg Gly Thr Trp Tyr Leu Thr Gly Ile Val
385   390   395   400

Ser Trp Gly Gln Gly Cys Ala Thr Val Gly His Phe Gly Val Tyr Thr
                405   410   415

Arg Val Ser Gln Tyr Ile Glu Trp Leu Gln Lys Leu Met Arg Ser Glu
            420   425   430

1343

```
    Pro Arg Pro Gly Val Leu Leu Arg Ala Pro Phe Pro
            435                 440


    <210>  2963
    <211>  272
    <212>  PRT
    <213>  Homo sapiens


    <400>  2963

    Arg Cys Lys Pro Ile Ser Gly His Asn Ser Leu Phe Trp Tyr Arg Gln
    1               5                   10                  15


    Thr Met Met Arg Gly Leu Glu Leu Leu Ile Tyr Phe Asn Asn Asn Val
                20                  25                  30


    Pro Ile Asp Asp Ser Gly Met Pro Glu Asp Arg Phe Ser Ala Lys Met
            35                  40                  45


    Pro Asn Ala Ser Phe Ser Thr Leu Lys Ile Gln Pro Ser Glu Pro Arg
        50                  55                  60


    Asp Ser Ala Val Tyr Phe Cys Ala Ser Ser Phe Ser Thr Cys Ser Ala
    65                  70                  75                  80


    Asn Tyr Gly Tyr Thr Phe Gly Ser Gly Thr Arg Leu Thr Val Val Glu
                    85                  90                  95


    Asp Leu Asn Lys Val Phe Pro Pro Glu Val Ala Val Phe Glu Pro Ser
                100                 105                 110


    Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val Cys Leu Ala
            115                 120                 125


    Thr Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly
        130                 135                 140


    Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Pro Leu Lys Glu
    145                 150                 155                 160


    Gln Pro Ala Leu Asn Asp Ser Arg Tyr Cys Leu Ser Ser Arg Leu Arg
                165                 170                 175


    Val Ser Ala Thr Phe Trp Gln Asn Pro Arg Asn His Phe Arg Cys Gln
                180                 185                 190


    Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr Gln Asp Arg
```

1344

```
                195                      200                      205


Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp Gly Arg Ala
    210                 215                 220


Asp Cys Gly Phe Thr Ser Val Ser Tyr Gln Gln Gly Val Leu Ser Ala
225                 230                 235                     240


Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu Tyr Ala Val
                245                 250                 255


Leu Val Ser Ala Leu Val Leu Met Ala Met Val Lys Arg Lys Asp Phe
                260                 265                 270
```

<210> 2964
<211> 276
<212> PRT
<213> Homo sapiens

<400> 2964

```
Met Tyr Arg Ile Ser Gln Leu Met Ser Thr Pro Val Ala Ser Ser Ser
1               5                   10                  15


Arg Leu Glu Arg Glu Tyr Ala Gly Glu Leu Ser Pro Thr Cys Ile Phe
                20                  25                  30


Pro Ser Phe Thr Cys Asp Ser Leu Asp Gly Tyr His Ser Phe Glu Cys
        35                  40                  45


Gly Ser Ile Asp Pro Leu Thr Gly Ser His Tyr Thr Cys Arg Arg Ser
    50                  55                  60


Pro Arg Leu Leu Thr Asn Gly Tyr Tyr Ile Trp Thr Glu Asp Ser Phe
65                  70                  75                      80


Leu Cys Asp Lys Asp Gly Asn Ile Thr Leu Asn Pro Ser Gln Thr Ser
                85                  90                  95


Val Met Tyr Lys Glu Asn Leu Val Ser Thr Ser Lys Ser Trp Leu His
                100                 105                 110


Gly Ser Ile Phe Gly Asp Ile Asn Ser Ser Pro Ser Glu Asp Asn Trp
                115                 120                 125


Leu Lys Gly Thr Arg Arg Leu Asp Thr Asp His Cys Asn Gly Asn Ala
    130                 135                 140
```

```
Asp Asp Leu Asp Cys Ser Ser Leu Thr Asp Asp Trp Glu Ser Gly Lys
145               150               155               160


Met Asn Ala Glu Ser Val Ile Thr Ser Ser Ser Ser His Ile Ile Ser
                  165               170               175


Gln Pro Pro Gly Gly Asn Ser His Ser Leu Ser Leu Gln Ser Gln Leu
              180               185               190


Thr Ala Ser Glu Arg Phe Gln Glu Asn Ser Ser Asp His Ser Glu Thr
              195               200               205


Arg Leu Leu Gln Glu Val Phe Phe Gln Ala Ile Leu Leu Ala Val Cys
        210               215               220


Leu Ile Thr Ser Ala Cys Ala Arg Trp Phe Met Gly Glu Ile Leu Ala
225               230               235               240


Ser Val Phe Thr Cys Ser Leu Met Ile Thr Val Ala Tyr Val Lys Ser
                  245               250               255


Leu Phe Leu Ser Leu Ala Ser Tyr Phe Lys Thr Thr Ala Cys Ala Arg
              260               265               270


Phe Val Lys Ile
          275


<210>   2965
<211>   133
<212>   PRT
<213>   Homo sapiens

<400>   2965

Met Val Leu Gln Thr Gln Val Phe Ile Ser Leu Leu Leu Trp Ile Ser
1                 5                 10                15


Gly Ala Tyr Gly Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala
              20                25                30


Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser
        35                40                45


Val Leu Tyr Ser Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln
    50                55                60


Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
```

                  65   70   75   80

        Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
                          85   90   95

        Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
                         100   105   110

        Tyr Cys Gln Gln Tyr Asp Thr Ile Pro Thr Phe Gly Gly Gly Thr Lys
                 115   120   125

        Val Glu Ile Lys Arg
            130

        <210> 2966
        <211> 369
        <212> PRT
        <213> Homo sapiens

        <400> 2966

        Met Leu Lys Pro Ser Leu Pro Phe Thr Ser Leu Leu Phe Leu Gln Leu
        1   5   10   15

        Pro Leu Leu Gly Val Gly Leu Asn Thr Thr Ile Leu Thr Pro Asn Gly
                     20   25   30

        Asn Glu Asp Thr Thr Ala Asp Phe Phe Leu Thr Thr Met Pro Thr Asp
                 35   40   45

        Ser Leu Ser Val Ser Thr Leu Pro Leu Pro Glu Val Gln Cys Phe Val
            50   55   60

        Phe Asn Val Glu Tyr Met Asn Cys Thr Trp Asn Ser Ser Ser Glu Pro
        65   70   75   80

        Gln Pro Thr Asn Leu Thr Leu His Tyr Trp Tyr Lys Asn Ser Asp Asn
                         85   90   95

        Asp Lys Val Gln Lys Cys Ser His Tyr Leu Phe Ser Glu Glu Ile Thr
                        100   105   110

        Ser Gly Cys Gln Leu Gln Lys Lys Glu Ile His Leu Tyr Gln Thr Phe
                 115   120   125

        Val Val Gln Leu Gln Asp Pro Arg Glu Pro Arg Arg Gln Ala Thr Gln
            130   135   140

                                        1347

Met Leu Lys Leu Gln Asn Leu Val Ile Pro Trp Ala Pro Glu Asn Leu
145   150   155   160

Thr Leu His Lys Leu Ser Glu Ser Gln Leu Glu Leu Asn Trp Asn Asn
                165   170   175

Arg Phe Leu Asn His Cys Leu Glu His Leu Val Gln Tyr Arg Thr Asp
            180   185   190

Trp Asp His Ser Trp Thr Glu Gln Ser Val Asp Tyr Arg His Lys Phe
            195   200   205

Ser Leu Pro Ser Val Asp Gly Gln Lys Arg Tyr Thr Phe Arg Val Arg
210   215   220

Ser Arg Phe Asn Pro Leu Cys Gly Ser Ala Gln His Trp Ser Glu Trp
225   230   235   240

Ser His Pro Ile His Trp Gly Ser Asn Thr Ser Lys Glu Asn Pro Phe
            245   250   255

Leu Phe Ala Leu Glu Ala Val Val Ile Ser Val Gly Ser Met Gly Leu
            260   265   270

Ile Ile Ser Leu Leu Cys Val Tyr Phe Trp Leu Glu Arg Thr Met Pro
            275   280   285

Arg Ile Pro Thr Leu Lys Asn Leu Glu Asp Leu Val Thr Glu Tyr His
290   295   300

Gly Asn Phe Ser Ala Trp Ser Gly Val Ser Lys Gly Leu Ala Glu Ser
305   310   315   320

Leu Gln Pro Asp Tyr Ser Glu Arg Leu Cys Leu Val Ser Glu Ile Pro
            325   330   335

Pro Lys Gly Gly Ala Leu Gly Glu Gly Pro Gly Ala Ser Pro Cys Asn
            340   345   350

Gln His Ser Pro Tyr Trp Ala Pro Pro Cys Tyr Thr Leu Lys Pro Glu
            355   360   365

Thr

1348

```
<210>  2967
<211>  323
<212>  PRT
<213>  Homo sapiens

<400>  2967
```

Met Ala Phe Ser Gly Ser Gln Ala Pro Tyr Leu Ser Pro Ala Val Pro
1   5   10   15

Phe Ser Gly Thr Ile Gln Gly Gly Leu Gln Asp Gly Leu Gln Ile Thr
            20   25   30

Val Asn Gly Thr Val Leu Ser Ser Ser Gly Thr Arg Phe Ala Val Asn
            35   40   45

Phe Gln Thr Gly Phe Ser Gly Asn Asp Ile Ala Phe His Phe Asn Pro
    50   55   60

Arg Phe Glu Asp Gly Gly Tyr Val Val Cys Asn Thr Arg Gln Asn Gly
65   70   75   80

Ser Trp Gly Pro Glu Glu Arg Arg Thr His Met Pro Phe Gln Lys Gly
                85   90   95

Met Pro Phe Asp Leu Cys Phe Leu Val Gln Ser Ser Asp Phe Lys Val
            100   105   110

Met Val Asn Gly Ile Leu Phe Val Gln Tyr Phe His Arg Val Pro Phe
            115   120   125

His Arg Val Asp Thr Ile Phe Val Asn Gly Ser Val Gln Leu Ser Tyr
    130   135   140

Ile Ser Phe Gln Pro Pro Gly Val Trp Pro Ala Asn Pro Ala Pro Ile
145   150   155   160

Thr Gln Thr Val Ile His Thr Val Gln Ser Ala Pro Gly Gln Met Phe
                165   170   175

Ser Thr Pro Ala Ile Pro Pro Met Met Tyr Pro His Pro Ala Tyr Pro
            180   185   190

Met Pro Phe Ile Thr Thr Ile Leu Gly Gly Leu Tyr Pro Ser Lys Ser
            195   200   205

Ile Leu Leu Ser Gly Thr Val Leu Pro Ser Ala Gln Arg Phe His Ile
    210   215   220

                               1349

```
Asn Leu Cys Ser Gly Asn His Ile Ala Phe His Leu Asn Leu Arg Phe
225             230             235                 240

Asp Glu Asn Ala Val Val Arg Asn Thr Gln Ile Asp Asn Ser Trp Gly
                245             250                 255

Ser Glu Glu Arg Ser Leu Pro Arg Lys Met Pro Phe Val Arg Gly Gln
            260             265             270

Ser Phe Ser Val Trp Ile Leu Cys Gly Ala His Cys Leu Lys Val Ala
        275             280             285

Val Asp Gly Gln His Leu Phe Glu Tyr Tyr His Arg Leu Arg Asn Leu
    290             295             300

Pro Thr Ile Asn Arg Leu Glu Val Gly Gly Asp Ile Gln Leu Thr His
305             310             315                 320

Val Gln Thr
```

```
<210>   2968
<211>   1866
<212>   PRT
<213>   Homo sapiens

<400>   2968
```

```
Met Asp Pro Val Gly Leu Gln Leu Gly Asn Lys Asn Leu Trp Ser Cys
1               5               10                  15

Leu Val Arg Leu Leu Thr Lys Asp Pro Glu Trp Leu Asn Ala Lys Met
            20              25              30

Lys Phe Phe Leu Pro Asn Thr Asp Leu Asp Ser Arg Asn Glu Thr Leu
        35              40              45

Asp Pro Glu Gln Arg Val Ile Leu Gln Leu Asn Lys Leu His Val Gln
    50              55              60

Gly Ser Asp Thr Trp Gln Ser Phe Ile His Cys Val Cys Met Gln Leu
65              70              75                  80

Glu Val Pro Leu Asp Leu Glu Val Leu Leu Leu Ser Thr Phe Gly Tyr
            85              90                  95
```

Asp Asp Gly Phe Thr Ser Gln Leu Gly Ala Glu Gly Lys Ser Gln Pro
        100   105   110

Glu Ser Gln Leu His His Gly Leu Lys Arg Pro His Gln Ser Cys Gly
        115   120   125

Ser Ser Pro Arg Arg Lys Gln Cys Lys Lys Gln Gln Leu Glu Leu Ala
        130   135   140

Lys Lys Tyr Leu Gln Leu Leu Arg Thr Ser Ala Gln Gln Arg Tyr Arg
145   150   155   160

Ser Gln Ile Pro Gly Ser Gly Gln Pro His Ala Phe His Gln Val Tyr
                165   170   175

Val Pro Pro Ile Leu Arg Arg Ala Thr Ala Ser Leu Asp Thr Pro Glu
                180   185   190

Gly Ala Ile Met Gly Asp Val Lys Val Glu Asp Gly Ala Asp Val Ser
            195   200   205

Ile Ser Asp Leu Phe Asn Thr Arg Val Asn Lys Gly Pro Arg Val Thr
    210   215   220

Val Leu Leu Gly Lys Ala Gly Met Gly Lys Thr Thr Leu Ala His Arg
225   230   235   240

Leu Cys Gln Lys Trp Ala Glu Gly His Leu Asn Cys Phe Gln Ala Leu
                245   250   255

Phe Leu Phe Glu Phe Arg Gln Leu Asn Leu Ile Thr Arg Phe Leu Thr
                260   265   270

Pro Ser Glu Leu Leu Phe Asp Leu Tyr Leu Ser Pro Glu Ser Asp His
        275   280   285

Asp Thr Val Phe Gln Tyr Leu Glu Lys Asn Ala Asp Gln Val Leu Leu
        290   295   300
                                .

Ile Phe Asp Gly Leu Asp Glu Ala Leu Gln Pro Met Gly Pro Asp Gly
305   310   315   320

Pro Gly Pro Val Leu Thr Leu Phe Ser His Leu Cys Asn Gly Thr Leu
            325   330   335

Leu Pro Gly Cys Arg Val Met Ala Thr Ser Arg Pro Gly Lys Leu Pro

1351

```
                  340                      345                        350


Ala Cys Leu Pro Ala Glu Ala Ala Met Val His Met Leu Gly Phe Asp
        355                 360                 365


Gly Pro Arg Val Glu Glu Tyr Val Asn His Phe Phe Ser Ala Gln Pro
        370                 375                 380


Ser Arg Glu Gly Ala Leu Val Glu Leu Gln Thr Asn Gly Arg Leu Arg
385                 390                 395                 400


Ser Leu Cys Ala Val Pro Ala Leu Cys Gln Val Ala Cys Leu Cys Leu
                405                 410                 415


His His Leu Leu Pro Asp His Ala Pro Gly Gln Ser Val Ala Leu Leu
        420                 425                 430


Pro Asn Met Thr Gln Leu Tyr Met Gln Met Val Leu Ala Leu Ser Pro
        435                 440                 445


Pro Gly His Leu Pro Thr Ser Ser Leu Leu Asp Leu Gly Glu Val Ala
    450                 455                 460


Leu Arg Gly Leu Glu Thr Gly Lys Val Ile Phe Tyr Ala Lys Asp Ile
465                 470                 475                 480


Ala Pro Pro Leu Ile Ala Phe Gly Ala Thr His Ser Leu Leu Thr Ser
                485                 490                 495


Phe Cys Val Cys Thr Gly Pro Gly His Gln Gln Thr Gly Tyr Ala Phe
                500                 505                 510


Thr His Leu Ser Leu Gln Glu Phe Leu Ala Ala Leu His Leu Met Ala
        515                 520                 525


Ser Pro Lys Val Asn Lys Asp Thr Leu Thr Gln Tyr Val Thr Leu His
        530                 535                 540


Ser Arg Trp Val Gln Arg Thr Lys Ala Arg Leu Gly Leu Ser Asp His
545                 550                 555                 560


Leu Pro Thr Phe Leu Ala Gly Leu Ala Ser Cys Thr Cys Arg Pro Phe
                565                 570                 575


Leu Ser His Leu Ala Gln Gly Asn Glu Asp Cys Val Gly Ala Lys Gln
        580                 585                 590
```

1352

Ala Ala Val Val Gln Val Leu Lys Lys Leu Ala Thr Arg Lys Leu Thr
        595   600   605

Gly Pro Lys Val Val Glu Leu Cys His Cys Val Asp Glu Thr Gln Glu
        610   615   620

Pro Glu Leu Ala Ser Leu Thr Ala Gln Ser Leu Pro Tyr Gln Leu Pro
625   630   635   640

Phe His Asn Phe Pro Leu Thr Cys Thr Asp Leu Ala Thr Leu Thr Asn
                645   650   655

Ile Leu Glu His Arg Glu Ala Pro Ile His Leu Asp Phe Asp Gly Cys
                660   665   670

Pro Leu Glu Pro His Cys Pro Glu Ala Leu Val Gly Cys Gly Gln Ile
        675   680   685

Glu Asn Leu Ser Phe Lys Ser Arg Lys Cys Gly Asp Ala Phe Ala Glu
        690   695   700

Ala Leu Ser Arg Ser Leu Pro Thr Met Gly Arg Leu Gln Met Leu Gly
705   710   715   720

Leu Ala Gly Ser Lys Ile Thr Ala Arg Gly Ile Ser His Leu Val Lys
                725   730   735

Ala Leu Pro Leu Cys Pro Gln Leu Lys Glu Val Ser Phe Arg Asp Asn
                740   745   750

Gln Leu Ser Asp Gln Val Val Leu Asn Ile Val Glu Val Leu Pro His
        755   760   765

Leu Pro Arg Leu Arg Lys Leu Asp Leu Ser Ser Asn Ser Ile Cys Val
        770   775   780

Ser Thr Leu Leu Cys Leu Ala Arg Val Ala Val Thr Cys Pro Thr Val
785   790   795   800

Arg Met Leu Gln Ala Arg Glu Arg Thr Ile Ile Phe Leu Leu Ser Pro
                805   810   815

Pro Thr Glu Thr Thr Ala Glu Leu Gln Arg Ala Pro Asp Leu Gln Glu
        820   825   830

1353

Ser Asp Gly Gln Arg Lys Gly Ala Gln Ser Arg Ser Leu Thr Leu Arg
        835   840   845

Leu Gln Lys Cys Gln Leu Gln Val His Asp Ala Glu Ala Leu Ile Ala
    850   855   860

Leu Leu Gln Glu Gly Pro His Leu Glu Glu Val Asp Leu Ser Gly Asn
865   870   875   880

Gln Leu Glu Asp Glu Gly Cys Arg Leu Met Ala Glu Ala Ala Ser Gln
                885   890   895

Leu His Ile Ala Arg Lys Leu Asp Leu Ser Asp Asn Gly Leu Ser Val
            900   905   910

Ala Gly Val His Cys Val Leu Arg Ala Val Ser Ala Cys Trp Thr Leu
        915   920   925

Ala Glu Leu His Ile Ser Leu Gln His Lys Thr Val Ile Phe Met Phe
    930   935   940

Ala Gln Glu Pro Glu Glu Gln Lys Gly Pro Gln Glu Arg Ala Ala Phe
945   950   955   960

Leu Asp Ser Leu Met Leu Gln Met Pro Ser Glu Leu Pro Leu Ser Ser
                965   970   975

Arg Arg Met Arg Leu Thr His Cys Gly Leu Gln Glu Lys His Leu Glu
            980   985   990

Gln Leu Cys Lys Ala Leu Gly Gly Ser Cys His Leu Gly His Leu His
        995   1000   1005

Leu Asp Phe Ser Gly Asn Ala Leu Gly Asp Glu Gly Ala Ala Arg
    1010   1015   1020

Leu Ala Gln Leu Leu Pro Gly Leu Gly Ala Leu Gln Ser Leu Asn
    1025   1030   1035

Leu Ser Glu Asn Gly Leu Ser Leu Asp Ala Val Leu Gly Leu Val
    1040   1045   1050

Arg Cys Phe Ser Thr Leu Gln Trp Leu Phe Arg Leu Asp Ile Ser
    1055   1060   1065

1354

Phe Glu Ser Gln His Ile Leu Leu Arg Gly Asp Lys Thr Ser Arg
    1070   1075   1080

Asp Met Trp Ala Thr Gly Ser Leu Pro Asp Phe Pro Ala Ala Ala
    1085   1090   1095

Lys Phe Leu Gly Phe Arg Gln Arg Cys Ile Pro Arg Ser Leu Cys
    1100   1105   1110

Leu Ser Glu Cys Pro Leu Glu Pro Pro Ser Leu Thr Arg Leu Cys
    1115   1120   1125

Ala Thr Leu Lys Asp Cys Pro Gly Pro Leu Glu Leu Gln Leu Ser
    1130   1135   1140

Cys Glu Phe Leu Ser Asp Gln Ser Leu Glu Thr Leu Leu Asp Cys
    1145   1150   1155

Leu Pro Gln Leu Pro Gln Leu Ser Leu Leu Gln Leu Ser Gln Thr
    1160   1165   1170

Gly Leu Ser Pro Lys Ser Pro Phe Leu Leu Ala Asn Thr Leu Ser
    1175   1180   1185

Leu Cys Pro Arg Val Lys Lys Val Asp Leu Arg Ser Leu His His
    1190   1195   1200

Ala Thr Leu His Phe Arg Ser Asn Glu Glu Glu Glu Gly Val Cys
    1205   1210   1215

Cys Gly Arg Phe Thr Gly Cys Ser Leu Ser Gln Glu His Val Glu
    1220   1225   1230

Ser Leu Cys Trp Leu Leu Ser Lys Cys Lys Asp Leu Ser Gln Val
    1235   1240   1245

Asp Leu Ser Ala Asn Leu Leu Gly Asp Ser Gly Leu Arg Cys Leu
    1250   1255   1260

Leu Glu Cys Leu Pro Gln Val Pro Ile Ser Gly Leu Leu Asp Leu
    1265   1270   1275

Ser His Asn Ser Ile Ser Gln Glu Ser Ala Leu Tyr Leu Leu Glu
    1280   1285   1290

Thr Leu Pro Ser Cys Pro Arg Val Arg Glu Ala Ser Val Asn Leu

1355

```
          1295                    1300                    1305
```

```
Gly Ser  Glu Gln Ser Phe Arg  Ile His Phe Ser Arg  Glu Asp Gln
    1310             1315             1320
```

```
Ala Gly  Lys Thr Leu Arg Leu  Ser Glu Cys Ser Phe  Arg Pro Glu
    1325             1330             1335
```

```
His Val  Ser Arg Leu Ala Thr  Gly Leu Ser Lys Ser  Leu Gln Leu
    1340             1345             1350
```

```
Thr Glu  Leu Thr Leu Thr Gln  Cys Cys Leu Gly Gln  Lys Gln Leu
    1355             1360             1365
```

```
Ala Ile  Leu Leu Ser Leu Val  Gly Arg Pro Ala Gly  Leu Phe Ser
    1370             1375             1380
```

```
Leu Arg  Val Gln Glu Pro Trp  Ala Asp Arg Ala Arg  Val Leu Ser
    1385             1390             1395
```

```
Leu Leu  Glu Val Cys Ala Gln  Ala Ser Gly Ser Val  Thr Glu Ile
    1400             1405             1410
```

```
Ser Ile  Ser Glu Thr Gln Gln  Gln Leu Cys Val Gln  Leu Glu Phe
    1415             1420             1425
```

```
Pro Arg  Gln Glu Glu Asn Pro  Glu Ala Val Ala Leu  Arg Leu Ala
    1430             1435             1440
```

```
His Cys  Asp Leu Gly Ala His  His Ser Leu Leu Val  Gly Gln Leu
    1445             1450             1455
```

```
Met Glu  Thr Cys Ala Arg Leu  Gln Gln Leu Ser Leu  Ser Gln Val
    1460             1465             1470
```

```
Asn Leu  Cys Glu Asp Asp Asp  Ala Ser Ser Leu Leu  Leu Gln Ser
    1475             1480             1485
```

```
Leu Leu  Leu Ser Leu Ser Glu  Leu Lys Thr Phe Arg  Leu Thr Ser
    1490             1495             1500
```

```
Ser Cys  Val Ser Thr Glu Gly  Leu Ala His Leu Ala  Ser Gly Leu
    1505             1510             1515
```

```
Gly His  Cys His His Leu Glu  Glu Leu Asp Leu Ser  Asn Asn Gln
    1520             1525             1530
```

Phe Asp Glu Glu Gly Thr Lys Ala Leu Met Arg Ala Leu Glu Gly
    1535   1540   1545

Lys Trp Met Leu Lys Arg Leu Asp Leu Ser His Leu Leu Leu Asn
    1550   1555   1560

Ser Ser Thr Leu Ala Leu Leu Thr His Arg Leu Ser Gln Met Thr
    1565   1570   1575

Cys Leu Gln Ser Leu Arg Leu Asn Arg Asn Ser Ile Gly Asp Val
    1580   1585   1590

Gly Cys Cys His Leu Ser Glu Ala Leu Arg Ala Ala Thr Ser Leu
    1595   1600   1605

Glu Glu Leu Asp Leu Ser His Asn Gln Ile Gly Asp Ala Gly Val
    1610   1615   1620

Gln His Leu Ala Thr Ile Leu Pro Gly Leu Pro Glu Leu Arg Lys
    1625   1630   1635

Ile Asp Leu Ser Gly Asn Ser Ile Ser Ser Ala Gly Gly Val Gln
    1640   1645   1650

Leu Ala Glu Ser Leu Val Leu Cys Arg Arg Leu Glu Glu Leu Met
    1655   1660   1665

Leu Gly Cys Asn Ala Leu Gly Asp Pro Thr Ala Leu Gly Leu Ala
    1670   1675   1680

Gln Glu Leu Pro Gln His Leu Arg Val Leu His Leu Pro Phe Ser
    1685   1690   1695

His Leu Gly Pro Gly Gly Ala Leu Ser Leu Ala Gln Ala Leu Asp
    1700   1705   1710

Gly Ser Pro His Leu Glu Glu Ile Ser Leu Ala Glu Asn Asn Leu
    1715   1720   1725

Ala Gly Gly Val Leu Arg Phe Cys Met Glu Leu Pro Leu Leu Arg
    1730   1735   1740

Gln Ile Asp Leu Val Ser Cys Lys Ile Asp Asn Gln Thr Ala Lys
    1745   1750   1755

```
Leu Leu  Thr Ser Ser Phe Thr  Ser Cys Pro Ala Leu  Glu Val Ile
    1760             1765             1770


Leu Leu  Ser Trp Asn Leu Leu  Gly Asp Glu Ala Ala  Ala Glu Leu
    1775             1780             1785


Ala Gln  Val Leu Pro Lys Met  Gly Arg Leu Lys Arg  Val Asp Leu
    1790             1795             1800


Glu Lys  Asn Gln Ile Thr Ala  Leu Gly Ala Trp Leu  Leu Ala Glu
    1805             1810             1815


Gly Leu  Ala Gln Gly Ser Ser  Ile Gln Val Ile Arg  Leu Trp Asn
    1820             1825             1830


Asn Pro  Ile Pro Cys Asp Met  Ala Gln His Leu Lys  Ser Gln Glu
    1835             1840             1845


Pro Arg  Leu Asp Phe Ala Phe  Phe Asp Asn Gln Pro  Gln Ala Pro
    1850             1855             1860


Trp Gly  Thr
    1865



<210>  2969
<211>  547
<212>  PRT
<213>  Homo sapiens

<400>  2969

Met Ala Thr Met Val Pro Ser Val Leu Trp Pro Arg Ala Cys Trp Thr
1               5               10              15


Leu Leu Val Cys Cys Leu Leu Thr Pro Gly Val Gln Gly Gln Glu Phe
            20              25              30


Leu Leu Arg Val Glu Pro Gln Asn Pro Val Leu Ser Ala Gly Gly Ser
        35              40              45


Leu Phe Val Asn Cys Ser Thr Asp Cys Pro Ser Ser Glu Lys Ile Ala
    50              55              60


Leu Glu Thr Ser Leu Ser Lys Glu Leu Val Ala Ser Gly Met Gly Trp
65              70              75              80


Ala Ala Phe Asn Leu Ser Asn Val Thr Gly Asn Ser Arg Ile Leu Cys
```

                    85   90   95

      Ser Val Tyr Cys Asn Gly Ser Gln Ile Thr Gly Ser Ser Asn Ile Thr
                    100   105   110

      Val Tyr Gly Leu Pro Glu Arg Val Glu Leu Ala Pro Leu Pro Pro Trp
                    115   120   125

      Gln Pro Val Gly Gln Asn Phe Thr Leu Arg Cys Gln Val Glu Gly Gly
          130   135   140

      Ser Pro Arg Thr Ser Leu Thr Val Val Leu Leu Arg Trp Glu Glu Glu
      145   150   155   160

      Leu Ser Arg Gln Pro Ala Val Glu Glu Pro Ala Glu Val Thr Ala Thr
                        165   170   175

      Val Leu Ala Ser Arg Asp Asp His Gly Ala Pro Phe Ser Cys Arg Thr
                    180   185   190

      Glu Leu Asp Met Gln Pro Gln Gly Leu Gly Leu Phe Val Asn Thr Ser
                    195   200   205

      Ala Pro Arg Gln Leu Arg Thr Phe Val Leu Pro Val Thr Pro Pro Arg
          210   215   220

      Leu Val Ala Pro Arg Phe Leu Glu Val Glu Thr Ser Trp Pro Val Asp
      225   230   235   240

      Cys Thr Leu Asp Gly Leu Phe Pro Ala Ser Glu Ala Gln Val Tyr Leu
                        245   250   255

      Ala Leu Gly Asp Gln Met Leu Asn Ala Thr Val Met Asn His Gly Asp
                    260   265   270

      Thr Leu Thr Ala Thr Ala Thr Ala Thr Ala Arg Ala Asp Gln Glu Gly
                    275   280   285

      Ala Arg Glu Ile Val Cys Asn Val Thr Leu Gly Gly Glu Arg Arg Glu
          290   295   300

      Ala Arg Glu Asn Leu Thr Val Phe Ser Phe Leu Gly Pro Ile Val Asn
      305   310   315   320

      Leu Ser Glu Pro Thr Ala His Glu Gly Ser Thr Val Thr Val Ser Cys
                    325   330   335

```
Met Ala Gly Ala Arg Val Gln Val Thr Leu Asp Gly Val Pro Ala Ala
         340              345              350


Ala Pro Gly Gln Pro Ala Gln Leu Gln Leu Asn Ala Thr Glu Ser Asp
         355              360              365


Asp Gly Arg Ser Phe Phe Cys Ser Ala Thr Leu Glu Val Asp Gly Glu
    370              375              380


Phe Leu His Arg Asn Ser Ser Val Gln Leu Arg Val Leu Tyr Gly Pro
385              390              395              400


Lys Ile Asp Arg Ala Thr Cys Pro Gln His Leu Lys Trp Lys Asp Lys
             405              410              415


Thr Arg His Val Leu Gln Cys Gln Ala Arg Gly Asn Pro Tyr Pro Glu
         420              425              430


Leu Arg Cys Leu Lys Glu Gly Ser Ser Arg Glu Val Pro Val Gly Ile
         435              440              445


Pro Phe Phe Val Asn Val Thr His Asn Gly Thr Tyr Gln Cys Gln Ala
    450              455              460


Ser Ser Ser Arg Gly Lys Tyr Thr Leu Val Val Val Met Asp Ile Glu
465              470              475              480


Ala Gly Ser Ser His Phe Val Pro Val Phe Val Ala Val Leu Leu Thr
             485              490              495


Leu Gly Val Val Thr Ile Val Leu Ala Leu Met Tyr Val Phe Arg Glu
         500              505              510


His Gln Arg Ser Gly Ser Tyr His Val Arg Glu Glu Ser Thr Tyr Leu
         515              520              525


Pro Leu Thr Ser Met Gln Pro Thr Glu Ala Met Gly Glu Glu Pro Ser
    530              535              540


Arg Ala Glu
545


<210>   2970
<211>   260
<212>   PRT
```

<213>   Homo sapiens

<400>   2970

Met Arg Pro Glu Asp Arg Met Phe His Ile Arg Ala Val Ile Leu Arg
1   5   10   15

Ala Leu Ser Leu Ala Phe Leu Leu Ser Leu Arg Gly Ala Gly Ala Ile
            20   25   30

Lys Ala Asp His Val Ser Thr Tyr Ala Ala Phe Val Gln Thr His Arg
        35   40   45

Pro Thr Gly Glu Phe Met Phe Glu Phe Asp Glu Asp Glu Met Phe Tyr
    50   55   60

Val Asp Leu Asp Lys Lys Glu Thr Val Trp His Leu Glu Glu Phe Gly
65   70   75   80

Gln Ala Phe Ser Phe Glu Ala Gln Gly Gly Leu Ala Asn Ile Ala Ile
                85   90   95

Leu Asn Asn Asn Leu Asn Thr Leu Ile Gln Arg Ser Asn His Thr Gln
            100   105   110

Ala Thr Asn Asp Pro Pro Glu Val Thr Val Phe Pro Lys Glu Pro Val
        115   120   125

Glu Leu Gly Gln Pro Asn Thr Leu Ile Cys His Ile Asp Lys Phe Phe
    130   135   140

Pro Pro Val Leu Asn Val Thr Trp Leu Cys Asn Gly Glu Leu Val Thr
145   150   155   160

Glu Gly Val Ala Glu Ser Leu Phe Leu Pro Arg Thr Asp Tyr Ser Phe
                165   170   175

His Lys Phe His Tyr Leu Thr Phe Val Pro Ser Ala Glu Asp Phe Tyr
            180   185   190

Asp Cys Arg Val Glu His Trp Gly Leu Asp Gln Pro Leu Leu Lys His
        195   200   205

Trp Glu Ala Gln Glu Pro Ile Gln Met Pro Glu Thr Thr Glu Thr Val
    210   215   220

Leu Cys Ala Leu Gly Leu Val Leu Gly Leu Val Gly Ile Ile Val Gly

225   230   235   240

Thr Val Leu Ile Ile Lys Ser Leu Arg Ser Gly His Asp Pro Arg Ala
            245   250   255

Gln Gly Thr Leu
            260

<210> 2971
<211> 495
<212> PRT
<213> Homo sapiens

<400> 2971

Met Pro Met Gly Ser Leu Gln Pro Leu Ala Thr Leu Tyr Leu Leu Gly
1   5   10   15

Met Leu Val Ala Ser Cys Leu Gly Arg Leu Ser Trp Tyr Asp Pro Asp
            20   25   30

Phe Gln Ala Arg Leu Thr Arg Ser Asn Ser Lys Cys Gln Gly Gln Leu
            35   40   45

Glu Val Tyr Leu Lys Asp Gly Trp His Met Val Cys Ser Gln Ser Trp
    50   55   60

Gly Arg Ser Ser Lys Gln Trp Glu Asp Pro Ser Gln Ala Ser Lys Val
65   70   75   80

Cys Gln Arg Leu Asn Cys Gly Val Pro Leu Ser Leu Gly Pro Phe Leu
                85   90   95

Val Thr Tyr Thr Pro Gln Ser Ser Ile Ile Cys Tyr Gly Gln Leu Gly
            100   105   110

Ser Phe Ser Asn Cys Ser His Ser Arg Asn Asp Met Cys His Ser Leu
            115   120   125

Gly Leu Thr Cys Leu Glu Pro Gln Lys Thr Thr Pro Pro Thr Thr Arg
    130   135   140

Pro Pro Pro Thr Thr Thr Pro Glu Pro Thr Ala Pro Pro Arg Leu Gln
145   150   155   160

Leu Val Ala Gln Ser Gly Gly Gln His Cys Ala Gly Val Val Glu Phe
                165   170   175

```
Tyr Ser Gly Ser Leu Gly Gly Thr Ile Ser Tyr Glu Ala Gln Asp Lys
        180                 185             190

Thr Gln Asp Leu Glu Asn Phe Leu Cys Asn Asn Leu Gln Cys Gly Ser
        195                 200             205

Phe Leu Lys His Leu Pro Glu Thr Glu Ala Gly Arg Ala Gln Asp Pro
    210                 215             220

Gly Glu Pro Arg Glu His Gln Pro Leu Pro Ile Gln Trp Lys Ile Gln
225             230             235                 240

Asn Ser Ser Cys Thr Ser Leu Glu His Cys Phe Arg Lys Ile Lys Pro
            245                 250             255

Gln Lys Ser Gly Arg Val Leu Ala Leu Leu Cys Ser Gly Phe Gln Pro
        260                 265             270

Lys Val Gln Ser Arg Leu Val Gly Gly Ser Ser Ile Cys Glu Gly Thr
        275                 280             285

Val Glu Val Arg Gln Gly Ala Gln Trp Ala Ala Leu Cys Asp Ser Ser
    290                 295             300

Ser Ala Arg Ser Ser Leu Arg Trp Glu Glu Val Cys Arg Glu Gln Gln
305                 310             315                 320

Cys Gly Ser Val Asn Ser Tyr Arg Val Leu Asp Ala Gly Asp Pro Thr
            325                 330             335

Ser Arg Gly Leu Phe Cys Pro His Gln Lys Leu Ser Gln Cys His Glu
            340                 345             350

Leu Trp Glu Arg Asn Ser Tyr Cys Lys Lys Val Phe Val Thr Cys Gln
        355                 360             365

Asp Pro Asn Pro Ala Gly Leu Ala Ala Gly Thr Val Ala Ser Ile Ile
    370                 375             380

Leu Ala Leu Val Leu Leu Val Val Leu Leu Val Val Cys Gly Pro Leu
385                 390             395                 400

Ala Tyr Lys Lys Leu Val Lys Lys Phe Arg Gln Lys Lys Gln Arg Gln
            405                 410             415
```

```
Trp Ile Gly Pro Thr Gly Met Asn Gln Asn Met Ser Phe His Arg Asn
             420                 425                 430


His Thr Ala Thr Val Arg Ser His Ala Glu Asn Pro Thr Ala Ser His
             435                 440                 445


Val Asp Asn Glu Tyr Ser Gln Pro Pro Arg Asn Ser Arg Leu Ser Ala
     450                 455                 460


Tyr Pro Ala Leu Glu Gly Val Leu His Arg Ser Ser Met Gln Pro Asp
465                 470                 475                 480


Asn Ser Ser Asp Ser Asp Tyr Asp Leu His Gly Ala Gln Arg Leu
                 485                 490                 495
```

```
<210>  2972
<211>  130
<212>  PRT
<213>  Homo sapiens

<400>  2972
```

```
Lys Val Phe Glu Arg Cys Glu Leu Ala Arg Thr Leu Lys Arg Leu Gly
1                 5                 10                  15


Met Asp Gly Tyr Arg Gly Ile Ser Leu Ala Asn Trp Met Cys Leu Ala
             20                  25                  30


Lys Trp Glu Ser Gly Tyr Asn Thr Arg Ala Thr Asn Tyr Asn Ala Gly
         35                  40                  45


Asp Arg Ser Thr Asp Tyr Gly Ile Phe Gln Ile Asn Ser Arg Tyr Trp
     50                  55                  60


Cys Asn Asp Gly Lys Thr Pro Gly Ala Val Asn Ala Cys His Leu Ser
65                  70                  75                  80


Cys Ser Ala Leu Leu Gln Asp Asn Ile Ala Asp Ala Val Ala Cys Ala
                 85                  90                  95


Lys Arg Val Val Arg Asp Pro Gln Gly Ile Arg Ala Trp Val Ala Trp
             100                 105                 110


Arg Asn Arg Cys Gln Asn Arg Asp Val Arg Gln Tyr Val Gln Gly Cys
         115                 120                 125


Gly Val
    130
```

<210> 2973
<211> 491
<212> PRT
<213> Homo sapiens

<400> 2973

Met Asn Pro Ala Ala Glu Ala Glu Phe Asn Ile Leu Leu Ala Thr Asp
1   5   10   15

Ser Tyr Lys Val Thr His Tyr Lys Gln Tyr Pro Pro Asn Thr Ser Lys
            20   25   30

Val Tyr Ser Tyr Phe Glu Cys Arg Glu Lys Lys Thr Glu Asn Ser Lys
            35   40   45

Leu Arg Lys Val Lys Tyr Glu Glu Thr Val Phe Tyr Gly Leu Gln Tyr
    50   55   60

Ile Leu Asn Lys Tyr Leu Lys Gly Lys Val Val Thr Lys Glu Lys Ile
65   70   75   80

Gln Glu Ala Lys Asp Val Tyr Lys Glu His Phe Gln Asp Asp Val Phe
                85   90   95

Asn Glu Lys Gly Trp Asn Tyr Ile Leu Glu Lys Tyr Asp Gly His Leu
            100   105   110

Pro Ile Glu Ile Lys Ala Val Pro Glu Gly Phe Val Ile Pro Arg Gly
            115   120   125

Asn Val Leu Phe Thr Val Glu Asn Thr Asp Pro Glu Cys Tyr Trp Leu
    130   135   140

Thr Asn Trp Ile Glu Thr Ile Leu Val Gln Ser Trp Tyr Pro Ile Thr
145   150   155   160

Val Ala Thr Asn Ser Arg Glu Gln Lys Lys Ile Leu Ala Lys Tyr Leu
            165   170   175

Leu Glu Thr Ser Gly Asn Leu Asp Gly Leu Glu Tyr Lys Leu His Asp
            180   185   190

Phe Gly Tyr Arg Gly Val Ser Ser Gln Glu Thr Ala Gly Ile Gly Ala
    195   200   205

1365

Ser Ala His Leu Val Asn Phe Lys Gly Thr Asp Thr Val Ala Gly Leu
210   215   220

Ala Leu Ile Lys Lys Tyr Tyr Gly Thr Lys Asp Pro Val Pro Gly Tyr
225   230   235   240

Ser Val Pro Ala Ala Glu His Ser Thr Ile Thr Ala Trp Gly Lys Asp
              245   250   255

His Glu Lys Asp Ala Phe Glu His Ile Val Thr Gln Phe Ser Ser Val
              260   265   270

Pro Val Ser Val Val Ser Asp Ser Tyr Asp Ile Tyr Asn Ala Cys Glu
              275   280   285

Lys Ile Trp Gly Glu Asp Leu Arg His Leu Ile Val Ser Arg Ser Thr
290   295   300

Gln Ala Pro Leu Ile Ile Arg Pro Asp Ser Gly Asn Pro Leu Asp Thr
305   310   315   320

Val Leu Lys Val Leu Glu Ile Leu Gly Lys Lys Phe Pro Val Thr Glu
              325   330   335

Asn Ser Lys Gly Tyr Lys Leu Leu Pro Pro Tyr Leu Arg Val Ile Gln
              340   345   350

Gly Asp Gly Val Asp Ile Asn Thr Leu Gln Glu Ile Val Glu Gly Met
              355   360   365

Lys Gln Lys Met Trp Ser Ile Glu Asn Ile Ala Phe Gly Ser Gly Gly
370   375   380

Gly Leu Leu Gln Lys Leu Thr Arg Asp Leu Leu Asn Cys Ser Phe Lys
385   390   395   400

Cys Ser Tyr Val Val Thr Asn Gly Leu Gly Ile Asn Val Phe Lys Asp
              405   410   415

Pro Val Ala Asp Pro Asn Lys Arg Ser Lys Lys Gly Arg Leu Ser Leu
              420   425   430

His Arg Thr Pro Ala Gly Asn Phe Val Thr Leu Glu Glu Gly Lys Gly
              435   440   445

Asp Leu Glu Glu Tyr Gly Gln Asp Leu Leu His Thr Val Phe Lys Asn

```
          450                    455                    460
```

Gly Lys Val Thr Lys Ser Tyr Ser Phe Asp Glu Ile Arg Lys Asn Ala
465   470   475   480

Gln Leu Asn Ile Glu Leu Glu Ala Ala His His
                485   490

<210> 2974
<211> 862
<212> PRT
<213> Homo sapiens

<400> 2974

Met Glu Arg Ala Glu Ser Ser Ser Thr Glu Pro Ala Lys Ala Ile Lys
1   5   10   15

Pro Ile Asp Arg Lys Ser Val His Gln Ile Cys Ser Gly Gln Val Val
            20   25   30

Leu Ser Leu Ser Thr Ala Val Lys Glu Leu Val Glu Asn Ser Leu Asp
        35   40   45

Ala Gly Ala Thr Asn Ile Asp Leu Lys Leu Lys Asp Tyr Gly Val Asp
    50   55   60

Leu Ile Glu Val Ser Asp Asn Gly Cys Gly Val Glu Glu Glu Asn Phe
65   70   75   80

Glu Gly Leu Thr Leu Lys His His Thr Ser Lys Ile Gln Glu Phe Ala
                85   90   95

Asp Leu Thr Gln Val Glu Thr Phe Gly Phe Arg Gly Glu Ala Leu Ser
            100   105   110

Ser Leu Cys Ala Leu Ser Asp Val Thr Ile Ser Thr Cys His Ala Ser
        115   120   125

Ala Lys Val Gly Thr Arg Leu Met Phe Asp His Asn Gly Lys Ile Ile
    130   135   140

Gln Lys Thr Pro Tyr Pro Arg Pro Arg Gly Thr Thr Val Ser Val Gln
145   150   155   160

Gln Leu Phe Ser Thr Leu Pro Val Arg His Lys Glu Phe Gln Arg Asn
                165   170   175

Ile Lys Lys Glu Tyr Ala Lys Met Val Gln Val Leu His Ala Tyr Cys
        180   185   190

Ile Ile Ser Ala Gly Ile Arg Val Ser Cys Thr Asn Gln Leu Gly Gln
        195   200   205

Gly Lys Arg Gln Pro Val Val Cys Thr Gly Gly Ser Pro Ser Ile Lys
    210   215   220

Glu Asn Ile Gly Ser Val Phe Gly Gln Lys Gln Leu Gln Ser Leu Ile
225   230   235   240

Pro Phe Val Gln Leu Pro Pro Ser Asp Ser Val Cys Glu Glu Tyr Gly
                245   250   255

Leu Ser Cys Ser Asp Ala Leu His Asn Leu Phe Tyr Ile Ser Gly Phe
            260   265   270

Ile Ser Gln Cys Thr His Gly Val Gly Arg Ser Ser Thr Asp Arg Gln
        275   280   285

Phe Phe Phe Ile Asn Arg Arg Pro Cys Asp Pro Ala Lys Val Cys Arg
    290   295   300

Leu Val Asn Glu Val Tyr His Met Tyr Asn Arg His Gln Tyr Pro Phe
305   310   315   320

Val Val Leu Asn Ile Ser Val Asp Ser Glu Cys Val Asp Ile Asn Val
                325   330   335

Thr Pro Asp Lys Arg Gln Ile Leu Leu Gln Glu Glu Lys Leu Leu Leu
            340   345   350

Ala Val Leu Lys Thr Ser Leu Ile Gly Met Phe Asp Ser Asp Val Asn
        355   360   365

Lys Leu Asn Val Ser Gln Gln Pro Leu Leu Asp Val Glu Gly Asn Leu
    370   375   380

Ile Lys Met His Ala Ala Asp Leu Glu Lys Pro Met Val Glu Lys Gln
385   390   395   400

Asp Gln Ser Pro Ser Leu Arg Thr Gly Glu Glu Lys Lys Asp Val Ser
            405   410   415

Ile Ser Arg Leu Arg Glu Ala Phe Ser Leu Arg His Thr Thr Glu Asn
        420   425   430

Lys Pro His Ser Pro Lys Thr Pro Glu Pro Arg Arg Ser Pro Leu Gly
        435   440   445

Gln Lys Arg Gly Met Leu Ser Ser Ser Thr Ser Gly Ala Ile Ser Asp
        450   455   460

Lys Gly Val Leu Arg Pro Gln Lys Glu Ala Val Ser Ser Ser His Gly
465   470   475   480

Pro Ser Asp Pro Thr Asp Arg Ala Glu Val Glu Lys Asp Ser Gly His
            485   490   495

Gly Ser Thr Ser Val Asp Ser Glu Gly Phe Ser Ile Pro Asp Thr Gly
        500   505   510

Ser His Cys Ser Ser Glu Tyr Ala Ala Ser Ser Pro Gly Asp Arg Gly
        515   520   525

Ser Gln Glu His Val Asp Ser Gln Glu Lys Ala Pro Glu Thr Asp Asp
        530   535   540

Ser Phe Ser Asp Val Asp Cys His Ser Asn Gln Glu Asp Thr Gly Cys
545   550   555   560

Lys Phe Arg Val Leu Pro Gln Pro Thr Asn Leu Ala Thr Pro Asn Thr
            565   570   575

Lys Arg Phe Lys Lys Glu Glu Ile Leu Ser Ser Ser Asp Ile Cys Gln
            580   585   590

Lys Leu Val Asn Thr Gln Asp Met Ser Ala Ser Gln Val Asp Val Ala
        595   600   605

Val Lys Ile Asn Lys Lys Val Val Pro Leu Asp Phe Ser Met Ser Ser
        610   615   620

Leu Ala Lys Arg Ile Lys Gln Leu His His Glu Ala Gln Gln Ser Glu
625   630   635   640

Gly Glu Gln Asn Tyr Arg Lys Phe Arg Ala Lys Ile Cys Pro Gly Glu
            645   650   655

Asn Gln Ala Ala Glu Asp Glu Leu Arg Lys Glu Ile Ser Lys Thr Met

```
                  660                    665                    670

      Phe Ala Glu Met Glu Ile Ile Gly Gln Phe Asn Leu Gly Phe Ile Ile
                  675                    680                    685

      Thr Lys Leu Asn Glu Asp Ile Phe Ile Val Asp Gln His Ala Thr Asp
                  690                    695                    700

      Glu Lys Tyr Asn Phe Glu Met Leu Gln Gln His Thr Val Leu Gln Gly
      705                    710                    715                    720

      Gln Arg Leu Ile Ala Pro Gln Thr Leu Asn Leu Thr Ala Val Asn Glu
                  725                    730                    735

      Ala Val Leu Ile Glu Asn Leu Glu Ile Phe Arg Lys Asn Gly Phe Asp
                  740                    745                    750

      Phe Val Ile Asp Glu Asn Ala Pro Val Thr Glu Arg Ala Lys Leu Ile
                  755                    760                    765

      Ser Leu Pro Thr Ser Lys Asn Trp Thr Phe Gly Pro Gln Asp Val Asp
      770                    775                    780

      Glu Leu Ile Phe Met Leu Ser Asp Ser Pro Gly Val Met Cys Arg Pro
      785                    790                    795                    800

      Ser Arg Val Lys Gln Met Phe Ala Ser Arg Ala Cys Arg Lys Ser Val
                  805                    810                    815

      Met Ile Gly Thr Ala Leu Asn Thr Ser Glu Met Lys Lys Leu Ile Thr
                  820                    825                    830

      His Met Gly Glu Met Asp His Pro Trp Asn Cys Pro His Gly Arg Pro
                  835                    840                    845

      Thr Met Arg His Ile Ala Asn Leu Gly Val Ile Ser Gln Asn
      850                    855                    860
```

```
<210>   2975
<211>   1256
<212>   PRT
<213>   Homo sapiens

<400>   2975

Met Tyr Leu Trp Leu Lys Leu Leu Ala Phe Gly Phe Ala Phe Leu Asp
1               5                   10                  15
```

```
Thr Glu Val Phe Val Thr Gly Gln Ser Pro Thr Pro Ser Pro Thr Gly
        20              25              30

Leu Thr Thr Ala Lys Met Pro Ser Val Pro Leu Ser Ser Asp Pro Leu
        35              40              45

Pro Thr His Thr Thr Ala Phe Ser Pro Ala Ser Thr Phe Glu Arg Glu
        50              55              60

Asn Asp Phe Ser Glu Thr Thr Thr Ser Leu Ser Pro Asp Asn Thr Ser
65              70              75              80

Thr Gln Val Ser Pro Asp Ser Leu Asp Asn Ala Ser Ala Phe Asn Thr
                85              90              95

Thr Gly Val Ser Ser Val Gln Thr Pro His Leu Pro Thr His Ala Asp
            100             105             110

Ser Gln Thr Pro Ser Ala Gly Thr Asp Thr Gln Thr Phe Ser Gly Ser
        115             120             125

Ala Ala Asn Ala Lys Leu Asn Pro Thr Pro Gly Ser Asn Ala Ile Ser
    130             135             140

Asp Ala Tyr Leu Asn Ala Ser Glu Thr Thr Thr Leu Ser Pro Ser Gly
145             150             155             160

Ser Ala Val Ile Ser Thr Thr Thr Ile Ala Thr Thr Pro Ser Lys Pro
            165             170             175

Thr Cys Asp Glu Lys Tyr Ala Asn Ile Thr Val Asp Tyr Leu Tyr Asn
        180             185             190

Lys Glu Thr Lys Leu Phe Thr Ala Lys Leu Asn Val Asn Glu Asn Val
        195             200             205

Glu Cys Gly Asn Asn Thr Cys Thr Asn Asn Glu Val His Asn Leu Thr
210             215             220

Glu Cys Lys Asn Ala Ser Val Ser Ile Ser His Asn Ser Cys Thr Ala
225             230             235             240

Pro Asp Lys Thr Leu Ile Leu Asp Val Pro Pro Gly Val Glu Lys Phe
        245             250             255
```

```
Gln Leu His Asp Cys Thr Gln Val Glu Lys Ala Asp Thr Thr Ile Cys
        260             265             270
```

```
Leu Lys Trp Lys Asn Ile Glu Thr Phe Thr Cys Asp Thr Gln Asn Ile
        275             280             285
```

```
Thr Tyr Arg Phe Gln Cys Gly Asn Met Ile Phe Asp Asn Lys Glu Ile
        290             295             300
```

```
Lys Leu Glu Asn Leu Glu Pro Glu His Glu Tyr Lys Cys Asp Ser Glu
305             310             315             320
```

```
Ile Leu Tyr Asn Asn His Lys Phe Thr Asn Ala Ser Lys Ile Ile Lys
        325             330             335
```

```
Thr Asp Phe Gly Ser Pro Gly Glu Pro Gln Ile Ile Phe Cys Arg Ser
        340             345             350
```

```
Glu Ala Ala His Gln Gly Val Ile Thr Trp Asn Pro Pro Gln Arg Ser
        355             360             365
```

```
Phe His Asn Phe Thr Leu Cys Tyr Ile Lys Glu Thr Glu Lys Asp Cys
370             375             380
```

```
Leu Asn Leu Asp Lys Asn Leu Ile Lys Tyr Asp Leu Gln Asn Leu Lys
385             390             395             400
```

```
Pro Tyr Thr Lys Tyr Val Leu Ser Leu His Ala Tyr Ile Ile Ala Lys
        405             410             415
```

```
Val Gln Arg Asn Gly Ser Ala Ala Met Cys His Phe Thr Thr Lys Ser
        420             425             430
```

```
Ala Pro Pro Ser Gln Val Trp Asn Met Thr Val Ser Met Thr Ser Asp
        435             440             445
```

```
Asn Ser Met His Val Lys Cys Arg Pro Pro Arg Asp Arg Asn Gly Pro
450             455             460
```

```
His Glu Arg Tyr His Leu Glu Val Glu Ala Gly Asn Thr Leu Val Arg
465             470             475             480
```

```
Asn Glu Ser His Lys Asn Cys Asp Phe Arg Val Lys Asp Leu Gln Tyr
        485             490             495
```

```
Ser Thr Asp Tyr Thr Phe Lys Ala Tyr Phe His Asn Gly Asp Tyr Pro
```

```
              500                    505                    510


Gly Glu Pro Phe Ile Leu His His Ser Thr Ser Tyr Asn Ser Lys Ala
        515                520                525


Leu Ile Ala Phe Leu Ala Phe Leu Ile Ile Val Thr Ser Ile Ala Leu
    530                535                540


Leu Val Val Leu Tyr Lys Ile Tyr Asp Leu His Lys Lys Arg Ser Cys
545                550                555                560


Asn Leu Asp Glu Gln Gln Glu Leu Val Glu Arg Asp Asp Glu Lys Gln
            565                570                575


Leu Met Asn Val Glu Pro Ile His Ala Asp Ile Leu Leu Glu Thr Tyr
        580                585                590


Lys Arg Lys Ile Ala Asp Glu Gly Arg Leu Phe Leu Ala Glu Phe Gln
        595                600                605


Ser Ile Pro Arg Val Phe Ser Lys Phe Pro Ile Lys Glu Ala Arg Lys
    610                615                620


Pro Phe Asn Gln Asn Lys Asn Arg Tyr Val Asp Ile Leu Pro Tyr Asp
625                630                635                640


Tyr Asn Arg Val Glu Leu Ser Glu Ile Asn Gly Asp Ala Gly Ser Asn
            645                650                655


Tyr Ile Asn Ala Ser Tyr Ile Asp Gly Phe Lys Glu Pro Arg Lys Tyr
            660                665                670


Ile Ala Ala Gln Gly Pro Arg Asp Glu Thr Val Asp Asp Phe Trp Arg
        675                680                685


Met Ile Trp Glu Gln Lys Ala Thr Val Ile Val Met Val Thr Arg Cys
    690                695                700


Glu Glu Gly Asn Arg Asn Lys Cys Ala Glu Tyr Trp Pro Ser Met Glu
705                710                715                720


Glu Gly Thr Arg Ala Phe Gly Asp Val Val Val Lys Ile Asn Gln His
            725                730                735


Lys Arg Cys Pro Asp Tyr Ile Ile Gln Lys Leu Asn Ile Val Asn Lys
        740                745                750
```

```
Lys Glu Lys Ala Thr Gly Arg Glu Val Thr His Ile Gln Phe Thr Ser
        755             760             765

Trp Pro Asp His Gly Val Pro Glu Asp Pro His Leu Leu Leu Lys Leu
        770             775             780

Arg Arg Arg Val Asn Ala Phe Ser Asn Phe Phe Ser Gly Pro Ile Val
785             790             795             800

Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr Tyr Ile Gly Ile
                805             810             815

Asp Ala Met Leu Glu Gly Leu Glu Ala Glu Asn Lys Val Asp Val Tyr
            820             825             830

Gly Tyr Val Val Lys Leu Arg Arg Gln Arg Cys Leu Met Val Gln Val
        835             840             845

Glu Ala Gln Tyr Ile Leu Ile His Gln Ala Leu Val Glu Tyr Asn Gln
    850             855             860

Phe Gly Glu Thr Glu Val Asn Leu Ser Glu Leu His Pro Tyr Leu His
865             870             875             880

Asn Met Lys Lys Arg Asp Pro Pro Ser Glu Pro Ser Pro Leu Glu Ala
            885             890             895

Glu Phe Gln Arg Leu Pro Ser Tyr Arg Ser Trp Arg Thr Gln His Ile
        900             905             910

Gly Asn Gln Glu Glu Asn Lys Ser Lys Asn Arg Asn Ser Asn Val Ile
        915             920             925

Pro Tyr Asp Tyr Asn Arg Val Pro Leu Lys His Glu Leu Glu Met Ser
    930             935             940

Lys Glu Ser Glu His Asp Ser Asp Glu Ser Ser Asp Asp Asp Ser Asp
945             950             955             960

Ser Glu Glu Pro Ser Lys Tyr Ile Asn Ala Ser Phe Ile Met Ser Tyr
            965             970             975

Trp Lys Pro Glu Val Met Ile Ala Ala Gln Gly Pro Leu Lys Glu Thr
        980             985             990
```

```
Ile Gly Asp Phe Trp Gln Met Ile  Phe Gln Arg Lys Val  Lys Val Ile
        995                 1000              1005


Val Met  Leu Thr Glu Leu Lys  His Gly Asp Gln Glu  Ile Cys Ala
    1010              1015              1020


Gln Tyr  Trp Gly Glu Gly Lys  Gln Thr Tyr Gly Asp  Ile Glu Val
    1025              1030              1035


Asp Leu  Lys Asp Thr Asp Lys  Ser Ser Thr Tyr Thr  Leu Arg Val
    1040              1045              1050


Phe Glu  Leu Arg His Ser Lys  Arg Lys Asp Ser Arg  Thr Val Tyr
    1055              1060              1065


Gln Tyr  Gln Tyr Thr Asn Trp  Ser Val Glu Gln Leu  Pro Ala Glu
    1070              1075              1080


Pro Lys  Glu Leu Ile Ser Met  Ile Gln Val Val Lys  Gln Lys Leu
    1085              1090              1095


Pro Gln  Lys Asn Ser Ser Glu  Gly Asn Lys His His  Lys Ser Thr
    1100              1105              1110


Pro Leu  Leu Ile His Cys Arg  Asp Gly Ser Gln Gln  Thr Gly Ile
    1115              1120              1125


Phe Cys  Ala Leu Leu Asn Leu  Leu Glu Ser Ala Glu  Thr Glu Glu
    1130              1135              1140


Val Val  Asp Ile Phe Gln Val  Val Lys Ala Leu Arg  Lys Ala Arg
    1145              1150              1155


Pro Gly  Met Val Ser Thr Phe  Glu Gln Tyr Gln Phe  Leu Tyr Asp
    1160              1165              1170


Val Ile  Ala Ser Thr Tyr Pro  Ala Gln Asn Gly Gln  Val Lys Lys
    1175              1180              1185


Asn Asn  His Gln Glu Asp Lys  Ile Glu Phe Asp Asn  Glu Val Asp
    1190              1195              1200


Lys Val  Lys Gln Asp Ala Asn  Cys Val Asn Pro Leu  Gly Ala Pro
    1205              1210              1215
```

1375

```
Glu Lys Leu Pro Glu Ala Lys Glu Gln Ala Glu Gly Ser Glu Pro
    1220              1225              1230


Thr Ser Gly Thr Glu Gly Pro Glu His Ser Val Asn Gly Pro Ala
    1235              1240              1245


Ser Pro Ala Leu Asn Gln Gly Ser
    1250              1255
```

```
<210>   2976
<211>   319
<212>   PRT
<213>   Homo sapiens

<400>   2976
```

```
Met Lys Met Ala Ser Ser Leu Ala Phe Leu Leu Leu Asn Phe His Val
1               5                   10                  15


Ser Leu Leu Leu Val Gln Leu Leu Thr Pro Cys Ser Ala Gln Phe Ser
            20                  25                  30


Val Leu Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala
            35                  40                  45


Asp Leu Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu
        50                  55                  60


Leu Lys Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala
65                  70                  75                  80


Asp Gly Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg
                85                  90                  95


Thr Ser Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Leu Arg
            100                 105                 110


Ile His Asn Val Thr Ala Ser Asp Ser Gly Lys Tyr Leu Cys Tyr Phe
            115                 120                 125


Gln Asp Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala
    130                 135                 140


Ala Leu Gly Ser Asn Leu His Val Glu Val Lys Gly Tyr Glu Asp Gly
145                 150                 155                 160


Gly Ile His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln
                165                 170                 175
```

```
Ile Gln Trp Ser Asn Ala Lys Gly Glu Asn Ile Pro Ala Val Glu Ala
            180                 185             190

Pro Val Val Ala Asp Gly Val Gly Leu Tyr Glu Val Ala Ala Ser Val
            195                 200             205

Ile Met Arg Gly Gly Ser Gly Glu Gly Val Ser Cys Ile Ile Arg Asn
            210                 215             220

Ser Leu Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Asp Pro
225                 230             235             240

Phe Phe Arg Ser Ala Gln Pro Trp Ile Ala Ala Leu Ala Gly Thr Leu
                245                 250             255

Pro Ile Leu Leu Leu Leu Leu Ala Gly Ala Ser Tyr Phe Leu Trp Arg
                260                 265             270

Gln Gln Lys Glu Ile Thr Ala Leu Ser Ser Glu Ile Glu Ser Glu Gln
            275                 280             285

Glu Met Lys Glu Met Gly Tyr Ala Ala Thr Glu Arg Glu Ile Ser Leu
    290                 295             300

Arg Glu Ser Leu Gln Glu Glu Leu Lys Arg Lys Lys Ser Ser Thr
305                 310             315
```

```
<210>  2977
<211>  240
<212>  PRT
<213>  Homo sapiens

<400>  2977
```

```
Met Leu Leu Gln Ser Gln Thr Met Gly Val Ser His Ser Phe Thr Pro
1               5               10              15

Lys Gly Ile Thr Ile Pro Gln Arg Glu Lys Pro Gly His Met Tyr Gln
            20                  25              30

Asn Glu Asp Tyr Leu Gln Asn Gly Leu Pro Thr Glu Thr Thr Val Leu
            35                  40              45

Gly Thr Val Gln Ile Leu Cys Cys Leu Leu Ile Ser Ser Leu Gly Ala
    50                  55                  60
```

1377

Ile Leu Val Phe Ala Pro Tyr Pro Ser His Phe Asn Pro Ala Ile Ser
65   70   75   80

Thr Thr Leu Met Ser Gly Tyr Pro Phe Leu Gly Ala Leu Cys Phe Gly
                85   90   95

Ile Thr Gly Ser Leu Ser Ile Ile Ser Gly Lys Gln Ser Thr Lys Pro
                100   105   110

Phe Asp Leu Ser Ser Leu Thr Ser Asn Ala Val Ser Ser Val Thr Ala
            115   120   125

Gly Ala Gly Leu Phe Leu Leu Ala Asp Ser Met Val Ala Leu Arg Thr
        130   135   140

Ala Ser Gln His Cys Gly Ser Glu Met Asp Tyr Leu Ser Ser Leu Pro
145   150   155   160

Tyr Ser Glu Tyr Tyr Tyr Pro Ile Tyr Glu Ile Lys Asp Cys Leu Leu
            165   170   175

Thr Ser Val Ser Leu Thr Gly Val Leu Val Val Met Leu Ile Phe Thr
            180   185   190

Val Leu Glu Leu Leu Leu Ala Ala Tyr Ser Ser Val Phe Trp Trp Lys
        195   200   205

Gln Leu Tyr Ser Asn Asn Pro Gly Ser Ser Phe Ser Ser Thr Gln Ser
    210   215   220

Gln Asp His Ile Gln Gln Val Lys Lys Ser Ser Ser Arg Ser Trp Ile
225   230   235   240

<210> 2978
<211> 266
<212> PRT
<213> Homo sapiens

<400> 2978

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Ser Leu Ala Ala Leu Thr
1   5   10   15

Val Thr Leu Met Val Leu Ser Ser Arg Leu Ala Phe Ala Gly Asp Thr
            20   25   30

Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn
        35   40   45

```
Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu
    50                  55                  60

Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr
65                  70                  75                  80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu
                85                  90                  95

Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr
            100                 105                 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Gln Val
            115                 120                 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu
    130                 135                 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp
145                 150                 155                 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu
            165                 170                 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr
            180                 185                 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser
            195                 200                 205

Val Thr Ser Ala Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala
    210                 215                 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu
225                 230                 235                 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His
            245                 250                 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser
            260                 265
```

```
<210>  2979
<211>  325
<212>  PRT
```

<213> Homo sapiens

<400> 2979

```
Met Pro Ile Thr Arg Met Arg Met Arg Pro Trp Leu Glu Met Gln Ile
1               5                   10                  15

Asn Ser Asn Gln Ile Pro Gly Leu Ile Trp Ile Asn Lys Glu Glu Met
            20                  25                  30

Ile Phe Gln Ile Pro Trp Lys His Ala Ala Lys His Gly Trp Asp Ile
        35                  40                  45

Asn Lys Asp Ala Cys Leu Phe Arg Ser Trp Ala Ile His Thr Gly Arg
    50                  55                  60

Tyr Lys Ala Gly Glu Lys Glu Pro Asp Pro Lys Thr Trp Lys Ala Asn
65                  70                  75                  80

Phe Arg Cys Ala Met Asn Ser Leu Pro Asp Ile Glu Glu Val Lys Asp
                85                  90                  95

Gln Ser Arg Asn Lys Gly Ser Ser Ala Val Arg Val Tyr Arg Met Leu
            100                 105                 110

Pro Pro Leu Thr Lys Asn Gln Arg Lys Glu Arg Lys Ser Lys Ser Ser
        115                 120                 125

Arg Asp Ala Lys Ser Lys Ala Lys Arg Lys Ser Cys Gly Asp Ser Ser
    130                 135                 140

Pro Asp Thr Phe Ser Asp Gly Leu Ser Ser Ser Thr Leu Pro Asp Asp
145                 150                 155                 160

His Ser Ser Tyr Thr Val Pro Gly Tyr Met Gln Asp Leu Glu Val Glu
                165                 170                 175

Gln Ala Leu Thr Pro Ala Leu Ser Pro Cys Ala Val Ser Ser Thr Leu
            180                 185                 190

Pro Asp Trp His Ile Pro Val Glu Val Val Pro Asp Ser Thr Ser Asp
        195                 200                 205

Leu Tyr Asn Phe Gln Val Ser Pro Met Pro Ser Thr Ser Glu Ala Thr
    210                 215                 220

Thr Asp Glu Asp Glu Glu Gly Lys Leu Pro Glu Asp Ile Met Lys Leu
```

```
225                   230                    235                     240
```

Leu Glu Gln Ser Glu Trp Gln Pro Thr Asn Val Asp Gly Lys Gly Tyr
            245   250   255

Leu Leu Asn Glu Pro Gly Val Gln Pro Thr Ser Val Tyr Gly Asp Phe
            260   265   270

Ser Cys Lys Glu Glu Pro Glu Ile Asp Ser Pro Gly Gly Asp Ile Gly
            275   280   285

Leu Ser Leu Gln Arg Val Phe Thr Asp Leu Lys Asn Met Asp Ala Thr
    290   295   300

Trp Leu Asp Ser Leu Leu Thr Pro Val Arg Leu Pro Ser Ile Gln Ala
305   310   315   320

Ile Pro Cys Ala Pro
            325

```
<210>   2980
<211>   132
<212>   PRT
<213>   Homo sapiens

<400>   2980
```

Met Glu Phe Asp Leu Asn Gly Asn Gly Asp Ile Gly Glu Lys Arg Val
1   5   10   15

Ile Cys Gly Gly Arg Val Val Cys Arg Pro Lys Lys Thr Glu Val Ser
            20   25   30

Pro Thr Cys Ser Ile Pro His Asp Leu Gly Gly Gly Pro Pro Thr Thr
            35   40   45

Val Gly Gly Arg Arg Met Gly Met Arg Lys Trp Glu Arg Arg Glu Arg
    50   55   60

Val Ser Pro Pro Ser Pro His Pro His Pro Leu Pro Pro Asp Ile Met
65   70   75   80

Ser Leu Lys Arg Met Leu Glu Lys Leu Gly Val Pro Lys Thr His Leu
            85   90   95

Glu Leu Lys Lys Leu Ile Gly Glu Val Ser Ser Gly Ser Gly Glu Thr
            100   105   110

Phe Ser Tyr Pro Asp Phe Leu Arg Met Met Leu Gly Lys Arg Ser Ala
        115   120   125

Ile Leu Lys Met
    130

<210> 2981
<211> 319
<212> PRT
<213> Homo sapiens

<400> 2981

Met Thr Asn Ser Ser Phe Phe Cys Pro Val Tyr Lys Asp Leu Glu Pro
1   5   10   15

Phe Thr Tyr Phe Phe Tyr Leu Val Phe Leu Val Gly Ile Ile Gly Ser
        20   25   30

Cys Phe Ala Thr Trp Ala Phe Ile Gln Lys Asn Thr Asn His Arg Cys
        35   40   45

Val Ser Ile Tyr Leu Ile Asn Leu Leu Thr Ala Asp Phe Leu Leu Thr
    50   55   60

Leu Ala Leu Pro Val Lys Ile Val Val Asp Leu Gly Val Ala Pro Trp
65   70   75   80

Lys Leu Lys Ile Phe His Cys Gln Val Thr Ala Cys Leu Ile Tyr Ile
            85   90   95

Asn Met Tyr Leu Ser Ile Ile Phe Leu Ala Phe Val Ser Ile Asp Arg
            100   105   110

Cys Leu Gln Leu Thr His Ser Cys Lys Ile Tyr Arg Ile Gln Glu Pro
        115   120   125

Gly Phe Ala Lys Met Ile Ser Thr Val Val Trp Leu Met Val Leu Leu
    130   135   140

Ile Met Val Pro Asn Met Met Ile Pro Ile Lys Asp Ile Lys Glu Lys
145   150   155   160

Ser Asn Val Gly Cys Met Glu Phe Lys Lys Glu Phe Gly Arg Asn Trp
            165   170   175

His Leu Leu Thr Asn Phe Ile Cys Val Ala Ile Phe Leu Asn Phe Ser

```
               180                      185                      190

    Ala Ile Ile Leu Ile Ser Asn Cys Leu Val Ile Arg Gln Leu Tyr Arg
            195                 200                 205

    Asn Lys Asp Asn Glu Asn Tyr Pro Asn Val Lys Lys Ala Leu Ile Asn
            210                 215                 220

    Ile Leu Leu Val Thr Thr Gly Tyr Ile Ile Cys Phe Val Pro Tyr His
    225                 230                 235                 240

    Ile Val Arg Ile Pro Tyr Thr Leu Ser Gln Thr Glu Val Ile Thr Asp
                    245                 250                 255

    Cys Ser Thr Arg Ile Ser Leu Phe Lys Ala Lys Glu Ala Thr Leu Leu
                260                 265                 270

    Leu Ala Val Ser Asn Leu Cys Phe Asp Pro Ile Leu Tyr Tyr His Leu
                275                 280                 285

    Ser Lys Ala Phe Arg Ser Lys Val Thr Glu Thr Phe Ala Ser Pro Lys
                290                 295                 300

    Glu Thr Lys Ala Gln Lys Glu Lys Leu Arg Cys Glu Asn Asn Ala
    305                 310                 315
```

```
<210>   2982
<211>   334
<212>   PRT
<213>   Homo sapiens

<400>   2982
```

```
    Met Leu Thr Lys Pro Leu Gln Gly Pro Pro Ala Pro Pro Gly Thr Pro
    1                   5                   10                  15

    Thr Pro Pro Pro Gly Gly Lys Asp Arg Glu Ala Phe Glu Ala Glu Tyr
                    20                  25                  30

    Arg Leu Gly Pro Leu Leu Gly Lys Gly Gly Phe Gly Thr Val Phe Ala
                35                  40                  45

    Gly His Arg Leu Thr Asp Arg Leu Gln Val Ala Ile Lys Val Ile Pro
            50                  55                  60

    Arg Asn Arg Val Leu Gly Trp Ser Pro Leu Ser Asp Ser Val Thr Cys
    65                  70                  75                  80
```

Pro Leu Glu Val Ala Leu Leu Trp Lys Val Gly Ala Gly Gly Gly His
              85   90   95

Pro Gly Val Ile Arg Leu Leu Asp Trp Phe Glu Thr Gln Glu Gly Phe
              100   105   110

Met Leu Val Leu Glu Arg Pro Leu Pro Ala Gln Asp Leu Phe Asp Tyr
              115   120   125

Ile Thr Glu Lys Gly Pro Leu Gly Glu Gly Pro Ser Arg Cys Phe Phe
              130   135   140

Gly Gln Val Val Ala Ala Ile Gln His Cys His Ser Arg Gly Val Val
145   150   155   160

His Arg Asp Ile Lys Asp Glu Asn Ile Leu Ile Asp Leu Arg Arg Gly
                   165   170   175

Cys Ala Lys Leu Ile Asp Phe Gly Ser Gly Ala Leu Leu His Asp Glu
              180   185   190

Pro Tyr Thr Asp Phe Asp Gly Thr Arg Val Tyr Ser Pro Pro Glu Trp
              195   200   205

Ile Ser Arg His Gln Tyr His Ala Leu Pro Ala Thr Val Trp Ser Leu
    210   215   220

Gly Ile Leu Leu Tyr Asp Met Val Cys Gly Asp Ile Pro Phe Glu Arg
225   230   235   240

Asp Gln Glu Ile Leu Glu Ala Glu Leu His Phe Pro Ala His Val Ser
              245   250   255

Pro Asp Cys Cys Ala Leu Ile Arg Arg Cys Leu Ala Pro Lys Pro Ser
              260   265   270

Ser Arg Pro Ser Leu Glu Glu Ile Leu Leu Asp Pro Trp Met Gln Thr
              275   280   285

Pro Ala Glu Asp Val Thr Pro Gln Pro Leu Gln Arg Arg Pro Cys Pro
              290   295   300

Phe Gly Leu Val Leu Ala Thr Leu Ser Leu Ala Trp Pro Gly Leu Ala
305   310   315   320

Pro Asn Gly Gln Lys Ser His Pro Met Ala Met Ser Gln Gly
                325   330

<210> 2983
<211> 158
<212> PRT
<213> Homo sapiens

<400> 2983

Met Met Gln Lys Leu Leu Lys Cys Ser Arg Leu Val Leu Ala Leu Ala
1   5   10   15

Leu Ile Leu Val Leu Glu Ser Ser Val Gln Gly Tyr Pro Thr Gln Arg
                20   25   30

Ala Arg Tyr Gln Trp Val Arg Cys Asn Pro Asp Ser Asn Ser Ala Asn
            35   40   45

Cys Leu Glu Glu Lys Gly Pro Met Phe Glu Leu Leu Pro Gly Glu Ser
        50   55   60

Asn Lys Ile Pro Arg Leu Arg Thr Asp Leu Phe Pro Lys Thr Arg Ile
65   70   75   80

Gln Asp Leu Asn Arg Ile Phe Pro Leu Ser Glu Asp Tyr Ser Gly Ser
                85   90   95

Gly Phe Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Phe
            100   105   110

Leu Thr Glu Met Glu Gln Asp Tyr Gln Leu Val Asp Glu Ser Asp Ala
        115   120   125

Phe His Asp Asn Leu Arg Ser Leu Asp Arg Asn Leu Pro Ser Asp Ser
        130   135   140

Gln Asp Leu Gly Gln His Gly Leu Glu Glu Asp Phe Met Leu
145   150   155

<210> 2984
<211> 1019
<212> PRT
<213> Homo sapiens

<400> 2984

Ala Asp Pro Glu Ser Pro Ile Leu Asp Leu Asp Leu His Leu Pro Leu
1   5   10   15

```
Leu Cys Phe Arg Pro Glu Lys Val Leu Gln Ile Leu Thr Cys Ile Leu
         20              25              30

Thr Glu Gln Arg Ile Val Phe Phe Ser Ser Asp Trp Ala Leu Leu Thr
         35              40              45

Leu Val Thr Glu Cys Phe Met Ala Tyr Leu Tyr Pro Leu Gln Trp Gln
     50              55              60

His Pro Phe Val Pro Ile Leu Ser Asp Gln Met Leu Asp Phe Val Met
65              70              75              80

Ala Pro Thr Ser Phe Leu Met Gly Cys His Leu Asp His Phe Glu Glu
                 85              90                  95

Val Ser Lys Glu Ala Asp Gly Leu Val Leu Ile Asn Ile Asp His Gly
         100             105             110

Ser Ile Thr Tyr Ser Lys Ser Thr Asp Asp Asn Val Asp Ile Pro Asp
         115             120             125

Val Pro Leu Leu Ala Ala Gln Thr Phe Ile Gln Arg Val Gln Ser Leu
     130             135             140

Gln Leu His His Glu Leu His Ala Ala His Leu Leu Ser Ser Thr Asp
145             150             155             160

Leu Lys Glu Gly Arg Ala His Arg Arg Ser Trp Gln Gln Lys Leu Asn
                 165             170             175

Cys Gln Ile Gln Gln Thr Thr Leu Gln Leu Leu Val Ser Ile Phe Arg
         180             185             190

Asp Val Lys Asn His Leu Asn Tyr Glu His Arg Val Phe Asn Ser Glu
         195             200             205

Glu Phe Leu Lys Thr Arg Ala Pro Gly Asp His Gln Phe Tyr Lys Gln
     210             215             220

Val Leu Asp Thr Tyr Met Phe His Ser Phe Leu Lys Ala Arg Leu Asn
225             230             235             240

Arg Arg Met Asp Ala Phe Ala Gln Met Asp Leu Asp Thr Gln Ser Glu
                 245             250             255
```

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1386

Glu Asp Arg Ile Asn Gly Met Leu Leu Ser Pro Arg Arg Pro Thr Val
        260   265   270

Glu Lys Arg Ala Ser Arg Lys Ser Ser His Leu His Val Thr His Arg
        275   280   285

Arg Met Val Val Ser Met Pro Asn Leu Gln Asp Ile Ala Met Pro Glu
    290   295   300

Leu Ala Pro Arg Asn Ser Ser Leu Arg Leu Thr Asp Thr Ala Gly Cys
305   310   315   320

Arg Gly Ser Ser Ala Val Leu Asn Val Thr Pro Lys Ser Pro Tyr Thr
            325   330   335

Phe Lys Ile Pro Glu Ile His Phe Pro Leu Glu Ser Lys Cys Val Gln
        340   345   350

Ala Tyr His Ala His Phe Val Ser Met Leu Ser Glu Ala Met Cys Phe
        355   360   365

Leu Ala Pro Asp Asn Ser Leu Leu Leu Ala Arg Tyr Leu Tyr Leu Arg
370   375   380

Gly Leu Val Tyr Leu Met Gln Gly Gln Leu Leu Asn Ala Leu Leu Asp
385   390   395   400

Phe Gln Asn Leu Tyr Lys Thr Asp Ile Arg Ile Phe Pro Thr Asp Leu
            405   410   415

Val Lys Arg Thr Val Glu Ser Met Ser Ala Pro Glu Trp Glu Gly Ala
        420   425   430

Glu Gln Ala Pro Glu Leu Met Arg Leu Ile Ser Glu Ile Leu Asp Lys
        435   440   445

Pro His Glu Ala Ser Lys Leu Asp Asp His Val Lys Lys Phe Lys Leu
    450   455   460

Pro Lys Lys His Met Gln Leu Gly Asp Phe Met Lys Arg Val Gln Glu
465   470   475   480

Ser Gly Ile Val Lys Asp Ala Ser Ile Ile His Arg Leu Phe Glu Ala
            485   490   495

Leu Thr Val Gly Gln Glu Lys Gln Ile Asp Pro Glu Thr Phe Lys Asp

1387

                      500   505   510

   Phe Tyr Asn Cys Trp Lys Glu Thr Glu Ala Glu Ala Gln Glu Val Ser
            515   520   525

   Leu Pro Trp Leu Val Met Glu His Leu Asp Lys Asn Glu Cys Val Cys
            530   535   540

   Lys Leu Ser Ser Ser Val Lys Thr Asn Leu Gly Val Gly Lys Ile Ala
   545   550   555   560

   Met Thr Gln Lys Arg Leu Phe Leu Leu Thr Glu Gly Arg Pro Gly Tyr
                 565   570   575

   Leu Glu Ile Ser Thr Phe Arg Asn Ile Glu Glu Val Arg Arg Thr Thr
                 580   585   590

   Thr Thr Phe Leu Leu Arg Arg Ile Pro Thr Leu Lys Ile Arg Val Ala
            595   600   605

   Ser Lys Lys Glu Val Phe Glu Ala Asn Leu Lys Thr Glu Cys Asp Leu
       610   615   620

   Trp His Leu Met Val Lys Glu Met Trp Ala Gly Lys Lys Leu Ala Asp
   625   630   635   640

   Asp His Lys Asp Pro His Tyr Val Gln Gln Ala Leu Thr Asn Val Leu
                 645   650   655

   Leu Met Asp Ala Val Val Gly Thr Leu Gln Ser Pro Gly Ala Ile Tyr
                 660   665   670

   Ala Ala Ser Lys Leu Ser Tyr Phe Asp Lys Met Ser Asn Glu Met Pro
            675   680   685

   Met Thr Leu Pro Glu Thr Thr Leu Glu Thr Leu Lys His Lys Ile Asn
            690   695   700

   Pro Ser Ala Gly Glu Ala Phe Pro Gln Ala Val Asp Val Leu Leu Tyr
   705   710   715   720

   Thr Pro Gly His Leu Asp Pro Ala Glu Lys Val Glu Asp Ala His Pro
                 725   730   735

   Lys Leu Trp Cys Ala Leu Ser Glu Gly Lys Val Thr Val Phe Asn Ala
                 740   745   750

```
Ser Ser Trp Thr Ile His Gln His Ser Phe Lys Val Gly Thr Ala Lys
        755              760              765

Val Asn Cys Met Val Met Ala Asp Gln Asn Gln Val Trp Val Gly Ser
    770              775              780

Glu Asp Ser Val Ile Tyr Ile Ile Asn Val His Ser Met Ser Cys Asn
785              790              795              800

Lys Gln Leu Thr Ala His Cys Ser Ser Val Thr Asp Leu Ile Val Gln
            805              810              815

Asp Gly Gln Glu Ala Pro Ser Asn Val Tyr Ser Cys Ser Met Asp Gly
            820              825              830

Met Val Leu Val Trp Asn Val Ser Thr Leu Gln Val Thr Ser Arg Phe
        835              840              845

Gln Leu Pro Arg Gly Gly Leu Thr Ser Ile Arg Leu His Gly Gly Arg
    850              855              860

Leu Trp Cys Cys Thr Gly Asn Ser Ile Met Val Met Lys Met Asn Gly
865              870              875              880

Ser Leu His Gln Glu Leu Lys Ile Glu Glu Asn Phe Lys Asp Thr Ser
            885              890              895

Thr Ser Phe Leu Ala Phe Gln Leu Leu Pro Glu Glu Glu Gln Leu Trp
            900              905              910

Ala Ala Cys Ala Gly Arg Ser Glu Val Tyr Ile Trp Ser Leu Lys Asp
        915              920              925

Leu Ala Gln Pro Pro Gln Arg Val Pro Leu Glu Asp Cys Ser Glu Ile
    930              935              940

Asn Cys Met Ile Arg Val Lys Lys Gln Val Trp Val Gly Ser Arg Gly
945              950              955              960

Leu Gly Gln Gly Thr Pro Lys Gly Lys Ile Tyr Val Ile Asp Ala Glu
            965              970              975

Arg Lys Thr Val Glu Lys Glu Leu Val Ala His Met Asp Thr Val Arg
        980              985              990
```

```
Thr Leu Cys Ser Ala Glu Asp Arg  Tyr Val Leu Ser Gly  Ser Gly Arg
        995              1000              1005


Glu Glu  Gly Lys Val Ala Ile  Trp Lys Gly Glu
    1010             1015
```

```
<210>  2985
<211>  783
<212>  PRT
<213>  Homo sapiens

<400>  2985

Met Ala Lys Tyr Asn Thr Gly Gly Asn Pro Thr Glu Asp Val Ser Val
1               5               10              15


Asn Ser Arg Pro Phe Arg Val Thr Gly Pro Asn Ser Ser Ser Gly Ile
            20              25              30


Gln Ala Arg Lys Asn Leu Phe Asn Asn Gln Gly Asn Ala Ser Pro Pro
            35              40              45


Ala Gly Pro Ser Asn Val Pro Lys Phe Gly Ser Pro Lys Pro Pro Val
    50              55              60


Ala Val Lys Pro Ser Ser Glu Glu Lys Pro Asp Lys Glu Pro Lys Pro
65              70              75              80


Pro Phe Leu Lys Pro Thr Gly Ala Gly Gln Arg Phe Gly Thr Pro Ala
            85              90              95


Ser Leu Thr Thr Arg Asp Pro Glu Ala Lys Val Gly Phe Leu Lys Pro
            100             105             110


Val Gly Pro Lys Pro Ile Asn Leu Pro Lys Glu Asp Ser Lys Pro Thr
            115             120             125


Phe Pro Trp Pro Pro Gly Asn Lys Pro Ser Leu His Ser Val Asn Gln
    130             135             140


Asp His Asp Leu Lys Pro Leu Gly Pro Lys Ser Gly Pro Thr Pro Pro
145             150             155             160


Thr Ser Glu Asn Glu Gln Lys Gln Ala Phe Pro Lys Leu Thr Gly Val
            165             170             175


Lys Gly Lys Phe Met Ser Ala Ser Gln Asp Leu Glu Pro Lys Pro Leu
```

```
              180                    185                    190


Phe Pro Lys Pro Ala Phe Gly Gln Lys Pro Pro Leu Ser Thr Glu Asn
         195             200             205


Ser His Glu Asp Glu Ser Pro Met Lys Asn Val Ser Ser Ser Lys Gly
    210             215             220


Ser Pro Ala Pro Leu Gly Val Arg Ser Lys Ser Gly Pro Leu Lys Pro
225             230             235             240


Ala Arg Glu Asp Ser Glu Asn Lys Asp His Ala Gly Glu Ile Ser Ser
             245             250             255


Leu Pro Phe Pro Gly Val Val Leu Lys Pro Ala Ala Ser Arg Gly Gly
         260             265             270


Leu Gly Leu Ser Lys Asn Gly Glu Glu Lys Lys Glu Asp Arg Lys Ile
         275             280             285


Asp Ala Ala Lys Asn Thr Phe Gln Ser Lys Ile Asn Gln Glu Glu Leu
    290             295             300


Ala Ser Gly Thr Pro Pro Ala Arg Phe Pro Lys Ala Pro Ser Lys Leu
305             310             315             320


Thr Val Gly Gly Pro Trp Gly Gln Ser Gln Glu Lys Glu Lys Gly Asp
             325             330             335


Lys Asn Ser Ala Thr Pro Lys Gln Lys Pro Leu Pro Pro Leu Phe Thr
         340             345             350


Leu Gly Pro Pro Pro Lys Pro Asn Arg Pro Pro Asn Val Asp Leu
         355             360             365


Thr Lys Phe His Lys Thr Ser Ser Gly Asn Ser Thr Ser Lys Gly Gln
    370             375             380


Thr Ser Tyr Ser Thr Thr Ser Leu Pro Pro Pro Pro Ser His Pro
385             390             395             400


Ala Ser Gln Pro Pro Leu Pro Ala Ser His Pro Ser Gln Pro Pro Val
             405             410             415


Pro Ser Leu Pro Pro Arg Asn Ile Lys Pro Pro Phe Asp Leu Lys Ser
         420             425             430
```

1391

```
Pro Val Asn Glu Asp Asn Gln Asp Gly Val Thr His Ser Asp Gly Ala
    435                 440                 445


Gly Asn Leu Asp Glu Glu Gln Asp Ser Glu Gly Glu Thr Tyr Glu Asp
    450                 455                 460


Ile Glu Ala Ser Lys Glu Arg Glu Lys Lys Arg Glu Lys Glu Glu Lys
465                 470                 475                 480


Lys Arg Leu Glu Leu Glu Lys Lys Glu Gln Lys Glu Lys Glu Lys Lys
                485                 490                 495


Glu Gln Glu Ile Lys Lys Lys Phe Lys Leu Thr Gly Pro Ile Gln Val
                500                 505                 510


Ile His Leu Ala Lys Ala Cys Cys Asp Val Lys Gly Gly Lys Asn Glu
        515                 520                 525
    `
Leu Ser Phe Lys Gln Gly Glu Gln Ile Glu Ile Ile Arg Ile Thr Asp
    530                 535                 540


Asn Pro Glu Gly Lys Trp Leu Gly Arg Thr Ala Arg Gly Ser Tyr Gly
545                 550                 555                 560


Tyr Ile Lys Thr Thr Ala Val Glu Ile Asp Tyr Asp Ser Leu Lys Leu
                565                 570                 575


Lys Lys Asp Ser Leu Gly Ala Pro Ser Arg Pro Ile Glu Asp Asp Gln
                580                 585                 590


Glu Val Tyr Asp Asp Val Ala Glu Gln Asp Asp Ile Ser Ser His Ser
                595                 600                 605


Gln Ser Gly Ser Gly Gly Ile Phe Pro Pro Pro Asp Asp Asp Ile
    610                 615                 620


Tyr Asp Gly Ile Glu Glu Glu Asp Ala Asp Asp Gly Phe Pro Ala Pro
625                 630                 635                 640


Pro Lys Gln Leu Asp Met Gly Asp Glu Val Tyr Asp Asp Val Asp Thr
                645                 650                 655


Ser Asp Phe Pro Val Ser Ser Ala Glu Met Ser Gln Gly Thr Asn Phe
                660                 665                 670
```

1392

```
Gly Lys Ala Lys Thr Glu Glu Lys Asp Leu Lys Lys Leu Lys Lys Gln
        675                 680                 685

Glu Lys Glu Glu Lys Asp Phe Arg Lys Lys Phe Lys Tyr Asp Gly Glu
        690                 695                 700

Ile Arg Val Leu Tyr Ser Thr Lys Val Thr Thr Ser Ile Thr Ser Lys
705                 710                 715                 720

Lys Trp Gly Thr Arg Asp Leu Gln Val Lys Pro Gly Glu Ser Leu Glu
                725                 730                 735

Val Ile Gln Thr Thr Asp Asp Thr Lys Val Leu Cys Arg Asn Glu Glu
                740                 745                 750

Gly Lys Tyr Gly Tyr Val Leu Arg Ser Tyr Leu Ala Asp Asn Asp Gly
            755                 760                 765

Glu Ile Tyr Asp Asp Ile Ala Asp Gly Cys Ile Tyr Asp Asn Asp
        770                 775                 780
```

```
<210>   2986
<211>   266
<212>   PRT
<213>   Homo sapiens

<400>   2986
```

```
Met Val Cys Leu Lys Leu Pro Gly Gly Ser Ser Leu Ala Ala Leu Thr
1               5                   10                  15

Val Thr Leu Met Val Leu Ser Ser Arg Leu Ala Phe Ala Gly Asp Thr
                20                  25                  30

Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn
        35                  40                  45

Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu
        50                  55                  60

Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr
65                  70                  75                  80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu
                85                  90                  95

Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr
```

```
                    100                 105                 110


    Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Gln Val
            115                 120                 125


    Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu
            130                 135                 140


    Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp
    145                 150                 155                 160


    Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu
                165                 170                 175


    Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr
                180                 185                 190


    Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser
                195                 200                 205


    Val Thr Ser Ala Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala
    210                 215                 220


    Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu
    225                 230                 235                 240


    Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His
                245                 250                 255


    Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser
                260                 265
```

```
<210>  2987
<211>  363
<212>  PRT
<213>  Homo sapiens

<400>  2987

Met Glu Val Lys Lys Lys His Asp Lys Gln Glu Gln Lys Gly Ser
1               5                   10                  15


Val Gly Ala Thr Phe Lys Leu Gly Asp Ser Leu Ser Asn Pro Asn Glu
            20                  25                  30


Arg Ala Ile Val Lys Glu Lys Met Val Ser Asn Thr Lys Ser Val Asp
            35                  40                  45
```

```
Thr Lys Ala Ser Ser Ser Lys Phe Ser Arg Ile Leu Thr Pro Lys Glu
    50              55              60

Tyr Leu Gln Arg Gln Lys His Lys Glu Ala Pro Ser Asn Lys Ala Ser
65              70              75              80

Lys Lys Ile Cys Val Lys Asn Val Pro Cys Asp Ser Glu His Met Arg
            85              90              95

Pro Ser Lys Leu Ala Val Gln Val Glu Ser Cys Gly Lys Ser Asn Glu
            100             105             110

Lys His Ser Ser Gly Val Gln Thr Ser Lys Glu Ser Leu Asn Gly Leu
            115             120             125

Thr Ser His Gly Lys Asn Leu Lys Ile His His Ser Gln Glu Ser Lys
    130             135             140

Thr Tyr Asn Ile Leu Arg Asn Val Lys Glu Lys Val Gly Gly Lys Gln
145             150             155             160

Pro Asp Lys Ile Trp Ile Asp Lys Thr Lys Leu Asp Lys Leu Thr Asn
            165             170             175

Ile Ser Asn Glu Ala Gln Phe Ser Gln Met Pro Pro Gln Val Lys Asp
            180             185             190

Gln Lys Lys Leu Tyr Leu Asn Arg Val Gly Phe Lys Cys Thr Glu Arg
            195             200             205

Glu Ser Ile Ser Leu Thr Lys Leu Glu Ser Ser Pro Arg Lys Leu His
    210             215             220

Lys Asp Lys Arg Gln Glu Asn Lys His Lys Thr Phe Leu Pro Val Lys
225             230             235             240

Gly Asn Thr Glu Lys Ser Asn Met Leu Glu Phe Lys Leu Cys Pro Asp
            245             250             255

Ile Leu Leu Lys Asn Thr Asn Ser Val Glu Glu Arg Lys Asp Val Lys
            260             265             270

Pro His Pro Arg Lys Glu Gln Ala Pro Leu Gln Val Ser Gly Ile Lys
    275             280             285
```

```
Ser Thr Lys Glu Asp Trp Leu Lys Phe Val Ala Thr Lys Lys Arg Thr
    290                 295                 300

Gln Lys Asp Ser Gln Glu Arg Asp Asn Val Asn Ser Arg Leu Ser Lys
305                 310                 315                 320

Arg Ser Phe Ser Ala Asp Gly Phe Glu Met Leu Gln Asn Pro Val Lys
            325                 330                 335

Asp Ser Lys Glu Met Phe Gln Thr Tyr Lys Gln Met Tyr Leu Glu Lys
            340                 345                 350

Arg Ser Arg Ser Leu Gly Ser Ser Pro Val Lys
        355                 360
```

```
<210>   2988
<211>   836
<212>   PRT
<213>   Homo sapiens

<400>   2988

Met Ala Arg Leu Gly Asn Cys Ser Leu Thr Trp Ala Ala Leu Ile Ile
1               5                   10                  15

Leu Leu Leu Pro Gly Ser Leu Glu Glu Cys Gly His Ile Ser Val Ser
            20                  25                  30

Ala Pro Ile Val His Leu Gly Asp Pro Ile Thr Ala Ser Cys Ile Ile
        35                  40                  45

Lys Gln Asn Cys Ser His Leu Asp Pro Glu Pro Gln Ile Leu Trp Arg
    50                  55                  60

Leu Gly Ala Glu Leu Gln Pro Gly Gly Arg Gln Gln Arg Leu Ser Asp
65                  70                  75                  80

Gly Thr Gln Glu Ser Ile Ile Thr Leu Pro His Leu Asn His Thr Gln
                85                  90                  95

Ala Phe Leu Ser Cys Cys Leu Asn Trp Gly Asn Ser Leu Gln Ile Leu
            100                 105                 110

Asp Gln Val Glu Leu Arg Ala Gly Tyr Pro Pro Ala Ile Pro His Asn
        115                 120                 125

Leu Ser Cys Leu Met Asn Leu Thr Thr Ser Ser Leu Ile Cys Gln Trp
    130                 135                 140
```

Glu Pro Gly Pro Glu Thr His Leu Pro Thr Ser Phe Thr Leu Lys Ser
145   150   155   160

Phe Lys Ser Arg Gly Asn Cys Gln Thr Gln Gly Asp Ser Ile Leu Asp
                165   170   175

Cys Val Pro Lys Asp Gly Gln Ser His Cys Cys Ile Pro Arg Lys His
                180   185   190

Leu Leu Leu Tyr Gln Asn Met Gly Ile Trp Val Gln Ala Glu Asn Ala
            195   200   205

Leu Gly Thr Ser Met Ser Pro Gln Leu Cys Leu Asp Pro Met Asp Val
        210   215   220

Val Lys Leu Glu Pro Pro Met Leu Arg Thr Met Asp Pro Ser Pro Glu
225   230   235   240

Ala Ala Pro Pro Gln Ala Gly Cys Leu Gln Leu Cys Trp Glu Pro Trp
                245   250   255

Gln Pro Gly Leu His Ile Asn Gln Lys Cys Glu Leu Arg His Lys Pro
            260   265   270

Gln Arg Gly Glu Ala Ser Trp Ala Leu Val Gly Pro Leu Pro Leu Glu
        275   280   285

Ala Leu Gln Tyr Glu Leu Cys Gly Leu Leu Pro Ala Thr Ala Tyr Thr
290   295   300

Leu Gln Ile Arg Cys Ile Arg Trp Pro Leu Pro Gly His Trp Ser Asp
305   310   315   320

Trp Ser Pro Ser Leu Glu Leu Arg Thr Thr Glu Arg Ala Pro Thr Val
                325   330   335

Arg Leu Asp Thr Trp Trp Arg Gln Arg Gln Leu Asp Pro Arg Thr Val
            340   345   350

Gln Leu Phe Trp Lys Pro Val Pro Leu Glu Glu Asp Ser Gly Arg Ile
            355   360   365

Gln Gly Tyr Val Val Ser Trp Arg Pro Ser Gly Gln Ala Gly Ala Ile
        370   375   380

Leu Pro Leu Cys Asn Thr Thr Glu Leu Ser Cys Thr Phe His Leu Pro
385   390   395   400

Ser Glu Ala Gln Glu Val Ala Leu Val Ala Tyr Asn Ser Ala Gly Thr
                    405   410   415

Ser Arg Pro Thr Pro Val Val Phe Ser Glu Ser Arg Gly Pro Ala Leu
                420   425   430

Thr Arg Leu His Ala Met Ala Arg Asp Pro His Ser Leu Trp Val Gly
                435   440   445

Trp Glu Pro Pro Asn Pro Trp Pro Gln Gly Tyr Val Ile Glu Trp Gly
    450   455   460

Leu Gly Pro Pro Ser Ala Ser Asn Ser Asn Lys Thr Trp Arg Met Glu
465   470   475   480

Gln Asn Gly Arg Ala Thr Gly Phe Leu Leu Lys Glu Asn Ile Arg Pro
                485   490   495

Phe Gln Leu Tyr Glu Ile Ile Val Thr Pro Leu Tyr Gln Asp Thr Met
                500   505   510

Gly Pro Ser Gln His Val Tyr Ala Tyr Ser Gln Glu Met Ala Pro Ser
                515   520   525

His Ala Pro Glu Leu His Leu Lys His Ile Gly Lys Thr Trp Ala Gln
    530   535   540

Leu Glu Trp Val Pro Glu Pro Pro Glu Leu Gly Lys Ser Pro Leu Thr
545   550   555   560

His Tyr Thr Ile Phe Trp Thr Asn Ala Gln Asn Gln Ser Phe Ser Ala
                565   570   575

Ile Leu Asn Ala Ser Ser Arg Gly Phe Val Leu His Gly Leu Glu Pro
                580   585   590

Ala Ser Leu Tyr His Ile His Leu Met Ala Ala Ser Gln Ala Gly Ala
                595   600   605

Thr Asn Ser Thr Val Leu Thr Leu Met Thr Leu Thr Pro Glu Gly Ser
    610   615   620

1398

Glu Leu His Ile Ile Leu Gly Leu Phe Gly Leu Leu Leu Leu Leu Thr
625   630   635   640

Cys Leu Cys Gly Thr Ala Trp Leu Cys Cys Ser Pro Asn Arg Lys Asn
              645   650   655

Pro Leu Trp Pro Ser Val Pro Asp Pro Ala His Ser Ser Leu Gly Ser
              660   665   670

Trp Val Pro Thr Ile Met Glu Glu Asp Ala Phe Gln Leu Pro Gly Leu
              675   680   685

Gly Thr Pro Pro Ile Thr Lys Leu Thr Val Leu Glu Glu Asp Glu Lys
690   695   700

Lys Pro Val Pro Trp Glu Ser His Asn Ser Ser Glu Thr Cys Gly Leu
705   710   715   720

Pro Thr Leu Val Gln Thr Tyr Val Leu Gln Gly Asp Pro Arg Ala Val
              725   730   735

Ser Thr Gln Pro Gln Ser Gln Ser Gly Thr Ser Asp Gln Val Leu Tyr
              740   745   750

Gly Gln Leu Leu Gly Ser Pro Thr Ser Pro Gly Pro Gly His Tyr Leu
              755   760   765

Arg Cys Asp Ser Thr Gln Pro Leu Leu Ala Gly Leu Thr Pro Ser Pro
770   775   780

Lys Ser Tyr Glu Asn Leu Trp Phe Gln Ala Ser Pro Leu Gly Thr Leu
785   790   795   800

Val Thr Pro Ala Pro Ser Gln Glu Asp Asp Cys Val Phe Gly Pro Leu
              805   810   815

Leu Asn Phe Pro Leu Leu Gln Gly Ile Arg Val His Gly Met Glu Ala
              820   825   830

Leu Gly Ser Phe
              835

<210> 2989
<211> 276
<212> PRT
<213> Homo sapiens

1399

<400> 2989

```
Met Gly Asn Ser Met Lys Ser Thr Pro Ala Pro Ala Glu Arg Pro Leu
1               5               10              15

Pro Asn Pro Glu Gly Leu Asp Ser Asp Phe Leu Ala Val Leu Ser Asp
            20              25              30

Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys
        35              40              45

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
    50              55              60

Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val
65              70              75              80

Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu
            85              90              95

Leu Leu Gln Leu Pro Asp Thr Lys Val Gly Ser Phe Met Ile Arg Glu
            100             105             110

Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln
        115             120             125

Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile
    130             135             140

Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Asn His Tyr
145             150             155             160

Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu
            165             170             175

Thr Gln Ser Thr Ala Ala Pro Ala Val Arg Ala Ser Ser Ser Pro Val
            180             185             190

Thr Leu Arg Gln Lys Thr Val Asp Trp Arg Arg Val Ser Arg Leu Gln
        195             200             205

Glu Asp Pro Glu Gly Thr Glu Asn Pro Leu Gly Val Asp Glu Ser Leu
    210             215             220

Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser Tyr Leu Ser Leu Thr
225             230             235             240
```

Ser Glu Asp Asn Thr Ser Phe Asp Arg Lys Lys Lys Ser Ile Ser Leu
                    245   250   255

Met Tyr Gly Gly Ser Lys Arg Lys Ser Ser Phe Phe Ser Ser Pro Pro
                260   265   270

Tyr Phe Glu Asp
            275

<210> 2990
<211> 359
<212> PRT
<213> Homo sapiens

<400> 2990

Met Ala Pro Asn Gly Thr Ala Ser Ser Phe Cys Leu Asp Ser Thr Ala
1   5   10   15

Cys Lys Ile Thr Ile Thr Val Val Leu Ala Val Leu Ile Leu Ile Thr
            20   25   30

Val Ala Gly Asn Val Val Val Cys Leu Ala Val Gly Leu Asn Arg Arg
        35   40   45

Leu Arg Asn Leu Thr Asn Cys Phe Ile Val Ser Leu Ala Ile Thr Asp
    50   55   60

Leu Leu Leu Gly Leu Leu Val Leu Pro Phe Ser Ala Ile Tyr Gln Leu
65   70   75   80

Ser Cys Lys Trp Ser Phe Gly Lys Val Phe Cys Asn Ile Tyr Thr Ser
            85   90   95

Leu Asp Val Met Leu Cys Thr Ala Ser Ile Leu Asn Leu Phe Met Ile
            100   105   110

Ser Leu Asp Arg Tyr Cys Ala Val Met Asp Pro Leu Arg Tyr Pro Val
        115   120   125

Leu Val Thr Pro Val Arg Val Ala Ile Ser Leu Val Leu Ile Trp Val
    130   135   140

Ile Ser Ile Thr Leu Ser Phe Leu Ser Ile His Leu Gly Trp Asn Ser
145   150   155   160

Arg Asn Glu Thr Ser Lys Gly Asn His Thr Thr Ser Lys Cys Lys Val

                165   170   175

    Gln Val Asn Glu Val Tyr Gly Leu Val Asp Gly Leu Val Thr Phe Tyr
                180   185   190

    Leu Pro Leu Leu Ile Met Cys Ile Thr Tyr Tyr Arg Ile Phe Lys Val
            195   200   205

    Ala Arg Asp Gln Ala Lys Arg Ile Asn His Ile Ser Ser Trp Lys Ala
        210   215   220

    Ala Thr Ile Arg Glu His Lys Ala Thr Val Thr Leu Ala Ala Val Met
    225   230   235   240

    Gly Ala Phe Ile Ile Cys Trp Phe Pro Tyr Phe Thr Ala Phe Val Tyr
                245   250   255

    Arg Gly Leu Arg Gly Asp Asp Ala Ile Asn Glu Val Leu Glu Ala Ile
                260   265   270

    Val Leu Trp Leu Gly Tyr Ala Asn Ser Ala Leu Asn Pro Ile Leu Tyr
            275   280   285

    Ala Ala Leu Asn Arg Asp Phe Arg Thr Gly Tyr Gln Gln Leu Phe Cys
        290   295   300

    Cys Arg Leu Ala Asn Arg Asn Ser His Lys Thr Ser Leu Arg Ser Asn
    305   310   315   320

    Ala Ser Gln Leu Ser Arg Thr Gln Ser Arg Glu Pro Arg Gln Gln Glu
                325   330   335

    Glu Lys Pro Leu Lys Leu Gln Val Trp Ser Gly Thr Glu Val Thr Ala
                340   345   350

    Pro Gln Gly Ala Thr Asp Arg
                355

    <210> 2991
    <211> 505
    <212> PRT
    <213> Homo sapiens

    <400> 2991

Met Gly Ser Met Lys Ser Lys Phe Leu Gln Val Gly Gly Asn Thr Phe
1   5   10   15

Ser Lys Thr Glu Thr Ser Ala Ser Pro His Cys Pro Val Tyr Val Pro
            20   25   30

Asp Pro Thr Ser Thr Ile Lys Pro Gly Pro Asn Ser His Asn Ser Asn
            35   40   45

Thr Pro Gly Ile Arg Glu Ala Gly Ser Glu Asp Ile Ile Val Val Ala
        50   55   60

Leu Tyr Asp Tyr Glu Ala Ile His His Glu Asp Leu Ser Phe Gln Lys
65   70   75   80

Gly Asp Gln Met Val Val Leu Glu Glu Ser Gly Glu Trp Trp Lys Ala
                85   90   95

Arg Ser Leu Ala Thr Arg Lys Glu Gly Tyr Ile Pro Ser Asn Tyr Val
            100   105   110

Ala Arg Val Asp Ser Leu Glu Thr Glu Glu Trp Phe Phe Lys Gly Ile
        115   120   125

Ser Arg Lys Asp Ala Glu Arg Gln Leu Leu Ala Pro Gly Asn Met Leu
    130   135   140

Gly Ser Phe Met Ile Arg Asp Ser Glu Thr Thr Lys Gly Ser Tyr Ser
145   150   155   160

Leu Ser Val Arg Asp Tyr Asp Pro Arg Gln Gly Asp Thr Val Lys His
                165   170   175

Tyr Lys Ile Arg Thr Leu Asp Asn Gly Gly Phe Tyr Ile Ser Pro Arg
            180   185   190

Ser Thr Phe Ser Thr Leu Gln Glu Leu Val Asp His Tyr Lys Lys Gly
        195   200   205

Asn Asp Gly Leu Cys Gln Lys Leu Ser Val Pro Cys Met Ser Ser Lys
    210   215   220

Pro Gln Lys Pro Trp Glu Lys Asp Ala Trp Glu Ile Pro Arg Glu Ser
225   230   235   240

Leu Lys Leu Glu Lys Lys Leu Gly Ala Gly Gln Phe Gly Glu Val Trp
                245   250   255

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1403

```
Met Ala Thr Tyr Asn Lys His Thr Lys Val Ala Val Lys Thr Met Lys
             260             265         270

Pro Gly Ser Met Ser Val Glu Ala Phe Leu Ala Glu Ala Asn Val Met
             275             280         285

Lys Thr Leu Gln His Asp Lys Leu Val Lys Leu His Ala Val Val Thr
290             295             300

Lys Glu Pro Ile Tyr Ile Ile Thr Glu Phe Met Ala Lys Gly Ser Leu
305             310             315             320

Leu Asp Phe Leu Lys Ser Asp Glu Gly Ser Lys Gln Pro Leu Pro Lys
             325             330             335

Leu Ile Asp Phe Ser Ala Gln Ile Ala Glu Gly Met Ala Phe Ile Glu
             340             345             350

Gln Arg Asn Tyr Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val
             355             360             365

Ser Ala Ser Leu Val Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Val
370             375             380

Ile Glu Asp Asn Glu Tyr Thr Ala Arg Glu Gly Ala Lys Phe Pro Ile
385             390             395             400

Lys Trp Thr Ala Pro Glu Ala Ile Asn Phe Gly Ser Phe Thr Ile Lys
             405             410             415

Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Met Glu Ile Val Thr Tyr
             420             425             430

Gly Arg Ile Pro Tyr Pro Gly Met Ser Asn Pro Glu Val Ile Arg Ala
             435             440             445

Leu Glu Arg Gly Tyr Arg Met Pro Arg Pro Glu Asn Cys Pro Glu Glu
             450             455             460

Leu Tyr Asn Ile Met Met Arg Cys Trp Lys Asn Arg Pro Glu Glu Arg
465             470             475             480

Pro Thr Phe Glu Tyr Ile Gln Ser Val Leu Asp Asp Phe Tyr Thr Ala
             485             490             495

Thr Glu Ser Gln Tyr Gln Gln Gln Pro
```

500   505

```
<210>   2992
<211>   1333
<212>   PRT
<213>   Homo sapiens

<400>   2992

Met Thr Ala Asp Lys Leu Val Phe Phe Val Asn Gly Arg Lys Val Val
1               5                   10                  15


Glu Lys Asn Ala Asp Pro Glu Thr Thr Leu Leu Ala Tyr Leu Arg Arg
                20                  25                  30


Lys Leu Gly Leu Ser Gly Thr Lys Leu Gly Cys Gly Glu Gly Gly Cys
        35                  40                  45


Gly Ala Cys Thr Val Met Leu Ser Lys Tyr Asp Arg Leu Gln Asn Lys
    50                  55                  60


Ile Val His Phe Ser Ala Asn Ala Cys Leu Ala Pro Ile Cys Ser Leu
65                  70                  75                  80


His His Val Ala Val Thr Thr Val Glu Gly Ile Gly Ser Thr Lys Thr
                85                  90                  95


Arg Leu His Pro Val Gln Glu Arg Ile Ala Lys Ser His Gly Ser Gln
                100                 105                 110


Cys Gly Phe Cys Thr Pro Gly Ile Val Met Ser Met Tyr Thr Leu Leu
            115                 120                 125


Arg Asn Gln Pro Glu Pro Thr Met Glu Glu Ile Glu Asn Ala Phe Gln
    130                 135                 140


Gly Asn Leu Cys Arg Cys Thr Gly Tyr Arg Pro Ile Leu Gln Gly Phe
145                 150                 155                 160


Arg Thr Phe Ala Arg Asp Gly Gly Cys Cys Gly Gly Asp Gly Asn Asn
                165                 170                 175


Pro Asn Cys Cys Met Asn Gln Lys Lys Asp His Ser Val Ser His Ser
                180                 185                 190


Pro Ser Leu Phe Lys Pro Glu Glu Phe Thr Pro Leu Asp Pro Thr Gln
            195                 200                 205
```

Glu Pro Ile Phe Pro Pro Glu Leu Leu Arg Leu Lys Asp Thr Pro Arg
210   215   220

Lys Gln Leu Arg Phe Glu Arg Glu Arg Val Thr Trp Ile Gln Ala Ser
225   230   235   240

Thr Leu Lys Glu Leu Leu Asp Leu Lys Ala Gln His Pro Asp Ala Lys
                245   250   255

Leu Val Val Gly Asn Thr Glu Ile Gly Ile Glu Met Lys Phe Lys Asn
                260   265   270

Met Leu Phe Pro Met Ile Val Cys Pro Ala Trp Ile Pro Glu Leu Asn
                275   280   285

Ser Val Glu His Gly Pro Asp Gly Ile Ser Phe Gly Ala Ala Cys Pro
    290   295   300

Leu Ser Ile Val Glu Lys Thr Leu Val Asp Ala Val Ala Lys Leu Pro
305   310   315   320

Ala Gln Lys Thr Glu Val Phe Arg Gly Val Leu Glu Gln Leu Arg Trp
                325   330   335

Phe Ala Gly Lys Gln Val Lys Ser Val Ala Ser Val Gly Gly Asn Ile
                340   345   350

Ile Thr Ala Ser Pro Ile Ser Asp Leu Asn Pro Val Phe Met Ala Ser
                355   360   365

Gly Ala Lys Leu Thr Leu Val Ser Arg Gly Thr Arg Arg Thr Val Gln
                370   375   380

Met Asp His Thr Phe Phe Pro Gly Tyr Arg Lys Thr Leu Leu Ser Pro
385   390   395   400

Glu Glu Ile Leu Leu Ser Ile Glu Ile Pro Tyr Ser Arg Glu Gly Glu
                405   410   415

Tyr Phe Ser Ala Phe Lys Gln Ala Ser Arg Arg Glu Asp Asp Ile Ala
                420   425   430

Lys Val Thr Ser Gly Met Arg Val Leu Phe Lys Pro Gly Thr Thr Glu
                435   440   445

Val Gln Glu Leu Ala Leu Cys Tyr Gly Gly Met Ala Asn Arg Thr Ile
    450   455   460

Ser Ala Leu Lys Thr Thr Gln Arg Gln Leu Ser Lys Leu Trp Lys Glu
465   470   475   480

Glu Leu Leu Gln Asp Val Cys Ala Gly Leu Ala Glu Glu Leu His Leu
                485   490   495

Pro Pro Asp Ala Pro Gly Gly Met Val Asp Phe Arg Cys Thr Leu Thr
                500   505   510

Leu Ser Phe Phe Phe Lys Phe Tyr Leu Thr Val Leu Gln Lys Leu Gly
        515   520   525

Gln Glu Asn Leu Glu Asp Lys Cys Gly Lys Leu Asp Pro Thr Phe Ala
    530   535   540

Ser Ala Thr Leu Leu Phe Gln Lys Asp Pro Pro Ala Asp Val Gln Leu
545   550   555   560

Phe Gln Glu Val Pro Lys Gly Gln Ser Glu Glu Asp Met Val Gly Arg
                565   570   575

Pro Leu Pro His Leu Ala Ala Asp Met Gln Ala Ser Gly Glu Ala Val
            580   585   590

Tyr Cys Asp Asp Ile Pro Arg Tyr Glu Asn Glu Leu Ser Leu Arg Leu
        595   600   605

Val Thr Ser Thr Arg Ala His Ala Lys Ile Lys Ser Ile Asp Thr Ser
    610   615   620

Glu Ala Lys Lys Val Pro Gly Phe Val Cys Phe Ile Ser Ala Asp Asp
625   630   635   640

Val Pro Gly Ser Asn Ile Thr Gly Ile Cys Asn Asp Glu Thr Val Phe
                645   650   655

Ala Lys Asp Lys Val Thr Cys Val Gly His Ile Ile Gly Ala Val Val
            660   665   670

Ala Asp Thr Pro Glu His Thr Gln Arg Ala Ala Gln Gly Val Lys Ile
        675   680   685

Thr Tyr Glu Glu Leu Pro Ala Ile Ile Thr Ile Glu Asp Ala Ile Lys

```
          690                    695                    700

Asn Asn Ser Phe Tyr Gly Pro Glu Leu Lys Ile Glu Lys Gly Asp Leu
705                 710             715                 720


Lys Lys Gly Phe Ser Glu Ala Asp Asn Val Val Ser Gly Glu Ile Tyr
                725             730                 735


Ile Gly Gly Gln Glu His Phe Tyr Leu Glu Thr His Cys Thr Ile Ala
            740             745             750


Val Pro Lys Gly Glu Ala Gly Glu Met Glu Leu Phe Val Ser Thr Gln
            755             760             765


Asn Thr Met Lys Thr Gln Ser Phe Val Ala Lys Met Leu Gly Val Pro
    770             775             780


Ala Asn Arg Ile Val Val Arg Val Lys Arg Met Gly Gly Gly Phe Gly
785             790             795                 800


Gly Lys Glu Thr Arg Ser Thr Val Val Ser Thr Ala Val Ala Leu Ala
            805             810             815


Ala Tyr Lys Thr Gly Arg Pro Val Arg Cys Met Leu Asp Arg Asp Glu
            820             825             830


Asp Met Leu Ile Thr Gly Gly Arg His Pro Phe Leu Ala Arg Tyr Lys
        835             840             845


Val Gly Phe Met Lys Thr Gly Thr Val Val Ala Leu Glu Val Asp His
    850             855             860


Phe Ser Asn Val Gly Asn Thr Gln Asp Leu Ser Gln Ser Ile Met Glu
865             870             875             880


Arg Ala Leu Phe His Met Asp Asn Cys Tyr Lys Ile Pro Asn Ile Arg
            885             890             895


Gly Thr Gly Arg Leu Cys Lys Thr Asn Leu Pro Ser Asn Thr Ala Phe
            900             905             910


Arg Gly Phe Gly Gly Pro Gln Gly Met Leu Ile Ala Glu Cys Trp Met
            915             920             925


Ser Glu Val Ala Val Thr Cys Gly Met Pro Ala Glu Glu Val Arg Arg
    930             935             940
```

1408

```
Lys Asn Leu Tyr Lys Glu Gly Asp Leu Thr His Phe Asn Gln Lys Leu
945                 950             955                 960

Glu Gly Phe Thr Leu Pro Arg Cys Trp Glu Glu Cys Leu Ala Ser Ser
            965             970             975

Gln Tyr His Ala Arg Lys Ser Glu Val Asp Lys Phe Asn Lys Glu Asn
        980             985                 990

Cys Trp Lys Lys Arg Gly Leu Cys Ile Ile Pro Thr Lys Phe Gly Ile
        995             1000            1005

Ser Phe Thr Val Pro Phe Leu Asn Gln Ala Gly Ala Leu Leu His
    1010            1015            1020

Val Tyr Thr Asp Gly Ser Val Leu Leu Thr His Gly Gly Thr Glu
    1025            1030            1035

Met Gly Gln Gly Leu His Thr Lys Met Val Gln Val Ala Ser Arg
    1040            1045            1050

Ala Leu Lys Ile Pro Thr Ser Lys Ile Tyr Ile Ser Glu Thr Ser
    1055            1060            1065

Thr Asn Thr Val Pro Asn Thr Ser Pro Thr Ala Ala Ser Val Ser
    1070            1075            1080

Ala Asp Leu Asn Gly Gln Ala Val Tyr Ala Ala Cys Gln Thr Ile
    1085            1090            1095

Leu Lys Arg Leu Glu Pro Tyr Lys Lys Lys Asn Pro Ser Gly Ser
    1100            1105            1110

Trp Glu Asp Trp Val Thr Ala Ala Tyr Met Asp Thr Val Ser Leu
    1115            1120            1125

Ser Ala Thr Gly Phe Tyr Arg Thr Pro Asn Leu Gly Tyr Ser Phe
    1130            1135            1140

Glu Thr Asn Ser Gly Asn Arg Phe His Tyr Phe Ser Tyr Gly Val
    1145            1150            1155

Ala Cys Ser Glu Val Glu Ile Asp Cys Leu Thr Gly Asp His Lys
    1160            1165            1170
```

1409

```
Asn Leu  Arg Thr Asp Ile Val  Met Asp Val Gly Ser  Ser Leu Asn
    1175                 1180                 1185


Pro Ala  Ile Asp Ile Gly Gln  Val Glu Gly Ala Phe  Val Gln Gly
    1190                 1195                 1200


Leu Gly  Leu Phe Thr Leu Glu  Glu Leu His Tyr Ser  Pro Glu Gly
    1205                 1210                 1215


Ser Leu  His Thr Arg Gly Pro  Ser Thr Tyr Lys Ile  Pro Ala Phe
    1220                 1225                 1230


Gly Ser  Ile Pro Ile Glu Phe  Arg Val Ser Leu Leu  Arg Asp Cys
    1235                 1240                 1245


Pro Asn  Lys Lys Ala Ile Tyr  Ala Ser Lys Ala Val  Gly Glu Pro
    1250                 1255                 1260


Pro Leu  Phe Leu Ala Ala Ser  Ile Phe Phe Ala Ile  Lys Asp Ala
    1265                 1270                 1275


Ile Arg  Ala Ala Arg Ala Gln  His Thr Gly Asn Asn  Val Lys Glu
    1280                 1285                 1290


Leu Phe  Arg Leu Asp Ser Pro  Ala Thr Pro Glu Lys  Ile Arg Asn
    1295                 1300                 1305


Ala Cys  Val Asp Lys Phe Thr  Thr Leu Cys Val Thr  Gly Val Pro
    1310                 1315                 1320


Glu Asn  Cys Lys Pro Trp Ser  Val Arg Val
    1325                 1330


<210>  2993
<211>  415
<212>  PRT
<213>  Homo sapiens

<400>  2993

Met Glu Gly Lys Ala Ile Ala Thr Ser Leu Gly Gly Asp Arg Val Leu
1                 5                 10                 15


Ile Phe Pro Cys Ser Pro Arg Ser Ser Phe Val Phe Thr Ser Arg Leu
              20                 25                 30


Ser Ser Leu Pro Leu Lys Arg Ala Ser Ile Gly Gly Ala Val Ser Cys
```

                35   40   45

Ser Gly Val Asn Gly Leu Thr Arg Trp Asn Ser Ile Val Ser Thr Arg
    50   55   60

Arg Leu Val Pro Val Arg Ser Ile Asn Ser Glu Ser Asp Ser Asp Ser
65   70   75   80

Asp Phe Pro His Glu Asn Gln Gln Gly Asn Pro Gly Leu Gly Lys Phe
                85   90   95

Lys Glu Tyr Gln Glu Trp Asp Ser Trp Thr Ala Lys Phe Ser Gly Gly
                100   105   110

Ala Asn Ile Pro Phe Leu Met Leu Gln Leu Pro Gln Ile Ile Leu Asn
        115   120   125

Thr Gln Asn Leu Leu Ala Gly Asn Asn Thr Ala Leu Ser Ala Val Pro
    130   135   140

Trp Leu Gly Met Leu Thr Gly Leu Leu Gly Asn Leu Ser Leu Leu Ser
145   150   155   160

Tyr Phe Ala Lys Lys Arg Glu Lys Glu Ala Ala Val Val Gln Thr Leu
                165   170   175

Gly Val Val Ser Thr His Ile Val Leu Ala Gln Leu Thr Met Ala Glu
            180   185   190

Ala Met Pro Ile Gln Tyr Phe Val Ala Thr Ser Ala Val Val Thr Ile
        195   200   205

Gly Leu Ile Val Asn Cys Leu Tyr Tyr Phe Gly Lys Leu Ser Lys Thr
    210   215   220

Val Trp Gln Leu Trp Glu Asp Val Ile Thr Ile Gly Gly Leu Ser Val
225   230   235   240

Leu Pro Gln Ile Met Trp Ser Thr Phe Val Pro Leu Val Pro Asn Ser
            245   250   255

Ile Leu Pro Gly Thr Thr Ala Phe Gly Ile Ala Val Ala Ala Ile Ile
            260   265   270

Met Ala Arg Thr Gly Lys Leu Ser Glu Lys Gly Val Arg Phe Val Gly
    275   280   285

```
Ser Leu Ser Gly Trp Thr Ala Thr Leu Met Phe Met Trp Met Pro Val
    290                 295             300

Ser Gln Met Trp Thr Asn Phe Leu Asn Pro Asp Asn Ile Lys Gly Leu
    305             310             315                 320

Ser Ser Ile Thr Met Leu Leu Ser Met Met Gly Asn Gly Leu Met Ile
                325             330                 335

Pro Arg Ala Leu Phe Ile Arg Asp Leu Met Trp Leu Thr Gly Ser Leu
            340             345             350

Trp Ala Thr Leu Phe Tyr Gly Tyr Gly Asn Ile Leu Cys Leu Tyr Leu
        355             360             365

Val Asn Cys Thr Ser Gln Ser Phe Phe Val Ala Ala Thr Ile Gly Leu
    370             375             380

Ile Ser Trp Ile Gly Leu Ala Leu Trp Arg Asp Ala Val Ala Tyr Gly
385             390             395                 400

His Asn Ser Pro Phe Arg Ser Leu Lys Glu Leu Val Phe Gly Pro
            405             410                 415
```

<211> 2994
<211> 363
<212> PRT
<213> Homo sapiens

<400> 2994

```
Met Ala Gln Thr Pro Ala Phe Asp Lys Pro Lys Val Glu Leu His Val
1               5               10              15

His Leu Asp Gly Ser Ile Lys Pro Glu Thr Ile Leu Tyr Tyr Gly Arg
            20              25              30

Arg Arg Gly Ile Ala Leu Pro Ala Asn Thr Ala Glu Gly Leu Leu Asn
        35              40              45

Val Ile Gly Met Asp Lys Pro Leu Thr Leu Pro Asp Phe Leu Ala Lys
    50              55              60

Phe Asp Tyr Tyr Met Pro Ala Ile Ala Gly Cys Arg Glu Ala Ile Lys
65              70              75              80
```

Arg Ile Ala Tyr Glu Phe Val Glu Met Lys Ala Lys Glu Gly Val Val
                    85   90   95

Tyr Val Glu Val Arg Tyr Ser Pro His Leu Leu Ala Asn Ser Lys Val
            100   105   110

Glu Pro Ile Pro Trp Asn Gln Ala Glu Gly Asp Leu Thr Pro Asp Glu
            115   120   125

Val Val Ala Leu Val Gly Gln Gly Leu Gln Glu Gly Glu Arg Asp Phe
        130   135   140

Gly Val Lys Ala Arg Ser Ile Leu Cys Cys Met Arg His Gln Pro Asn
145   150   155   160

Trp Ser Pro Lys Val Val Glu Leu Cys Lys Asn Tyr Gln Gln Gln Thr
                165   170   175

Val Val Ala Ile Asp Leu Ala Gly Asp Glu Thr Ile Pro Gly Ser Ser
            180   185   190

Leu Leu Pro Gly His Val Gln Ala Tyr Gln Glu Ala Val Lys Ser Gly
            195   200   205

Ile His Arg Thr Val His Ala Gly Glu Val Gly Ser Ala Glu Val Val
        210   215   220

Lys Glu Ala Val Asp Ile Leu Lys Thr Glu Arg Leu Gly His Gly Tyr
225   230   235   240

His Thr Leu Glu Asp Gln Ala Leu Tyr Asn Arg Leu Arg Gln Glu Asn
                245   250   255

Met His Phe Glu Ile Cys Pro Trp Ser Ser Tyr Leu Thr Gly Ala Trp
            260   265   270

Lys Pro Asp Thr Glu His Ala Val Ile Arg Leu Lys Asn Asp Gln Ala
            275   280   285

Asn Tyr Ser Leu Asn Thr Asp Asp Pro Leu Ile Phe Lys Ser Thr Leu
        290   295   300

Asp Thr Asp Tyr Gln Met Thr Lys Arg Asp Met Gly Phe Thr Glu Glu
305   310   315   320

Glu Phe Lys Arg Leu Asn Ile Asn Ala Ala Lys Ser Ser Phe Leu Pro

```
                    325                     330                      335
```

Glu Asp Glu Lys Arg Glu Leu Leu Asp Leu Leu Tyr Lys Ala Tyr Gly
            340   345   350

Met Pro Pro Ser Ala Ser Ala Gly Gln Asn Leu
            355   360

<210> 2995
<211> 691
<212> PRT
<213> Homo sapiens

<400> 2995

Met Met Arg Asn His Arg Ile Ala Ser Ser Leu Cys Gly Asp Gln Val
1   5   10   15

Phe Ser Lys Lys Lys Lys Lys Lys Lys Asn Asn Met Ala Ala Lys
            20   25   30

Glu Lys Leu Glu Ala Val Leu Asn Val Ala Leu Arg Val Pro Ser Ile
            35   40   45

Met Leu Leu Asp Val Leu Tyr Arg Trp Asp Val Ser Ser Phe Phe Gln
            50   55   60

Gln Ile Gln Arg Ser Ser Leu Ser Asn Asn Pro Leu Phe Gln Tyr Lys
65   70   75   80

Tyr Leu Ala Leu Asn Met His Tyr Val Gly Tyr Ile Leu Ser Val Val
            85   90   95

Leu Leu Thr Leu Pro Arg Gln His Leu Val Gln Leu Tyr Leu Tyr Phe
            100   105   110

Leu Thr Ala Leu Leu Leu Tyr Ala Gly His Gln Ile Ser Arg Asp Tyr
            115   120   125

Val Arg Ser Glu Leu Glu Phe Ala Tyr Glu Gly Pro Met Tyr Leu Glu
            130   135   140

Pro Leu Ser Met Asn Arg Phe Thr Thr Ala Leu Ile Gly Gln Leu Val
145   150   155   160

Val Cys Thr Leu Cys Ser Cys Val Met Lys Thr Lys Gln Ile Trp Leu
            165   170   175

1414

```
Phe Ser Ala His Met Leu Pro Leu Leu Ala Arg Leu Cys Leu Val Pro
            180             185             190

Leu Glu Thr Ile Val Ile Ile Asn Lys Phe Ala Met Ile Phe Thr Gly
            195             200             205

Leu Glu Val Leu Tyr Phe Leu Gly Ser Asn Leu Leu Val Pro Tyr Asn
            210             215             220

Leu Ala Lys Ser Ala Tyr Arg Glu Leu Val Gln Val Val Glu Val Tyr
225             230             235             240

Gly Leu Leu Ala Leu Gly Met Ser Leu Trp Asn Gln Leu Val Val Pro
            245             250             255

Val Leu Phe Met Val Phe Trp Leu Val Leu Phe Ala Leu Gln Ile Tyr
            260             265             270

Ser Tyr Phe Ser Thr Arg Asp Gln Pro Ala Ser Arg Glu Arg Leu Leu
            275             280             285

Phe Leu Phe Leu Thr Ser Ile Ala Glu Cys Cys Ser Thr Pro Tyr Ser
            290             295,            300

Leu Leu Gly Leu Val Phe Thr Val Ser Phe Val Ala Leu Gly Val Leu
305             310             315             320

Thr Leu Cys Lys Phe Tyr Leu Gln Gly Tyr Arg Ala Phe Met Asn Asp
            325             330             335

Pro Ala Met Asn Arg Gly Met Thr Glu Gly Val Thr Leu Leu Ile Leu
            340             345             350

Ala Val Gln Thr Gly Leu Ile Glu Leu Gln Val Val His Arg Ala Phe
            355             360             365

Leu Leu Ser Ile Ile Leu Phe Ile Val Val Ala Ser Ile Leu Gln Ser
370             375             380

Met Leu Glu Ile Ala Asp Pro Ile Val Leu Ala Leu Gly Ala Ser Arg
385             390             395             400

Asp Lys Ser Leu Trp Lys His Phe Arg Ala Val Ser Leu Cys Leu Phe
            405             410             415
```

```
Leu Leu Val Phe Pro Ala Tyr Met Ala Tyr Met Ile Cys Gln Phe Phe
            420              425              430

His Met Asp Phe Trp Leu Leu Ile Ile Ile Ser Ser Ser Ile Leu Thr
            435              440              445

Ser Leu Gln Val Leu Gly Thr Leu Phe Ile Tyr Val Leu Phe Met Val
    450              455              460

Glu Glu Phe Arg Lys Glu Pro Val Glu Asn Met Asp Asp Val Ile Tyr
465              470              475              480

Tyr Val Asn Gly Thr Tyr Arg Leu Leu Glu Phe Leu Val Ala Leu Cys
            485              490              495

Val Val Ala Tyr Gly Val Ser Glu Thr Ile Phe Gly Glu Trp Thr Val
            500              505              510

Met Gly Ser Met Ile Ile Phe Ile His Ser Tyr Tyr Asn Val Trp Leu
            515              520              525

Arg Ala Gln Leu Gly Trp Lys Ser Phe Leu Leu Arg Arg Asp Ala Val
    530              535              540

Asn Lys Ile Lys Ser Leu Pro Ile Ala Thr Lys Glu Gln Leu Glu Lys
545              550              555              560

His Asn Asp Ile Cys Ala Ile Cys Tyr Gln Asp Met Lys Ser Ala Val
            565              570              575

Ile Thr Pro Cys Ser His Phe Phe His Ala Gly Cys Leu Lys Lys Trp
            580              585              590

Leu Tyr Val Gln Glu Thr Cys Pro Leu Cys His Cys His Leu Lys Asn
    595              600              605

Ser Ser Gln Leu Pro Gly Leu Gly Thr Glu Pro Val Leu Gln Pro His
    610              615              620

Ala Gly Ala Glu Gln Asn Val Met Phe Gln Glu Gly Thr Glu Pro Pro
625              630              635              640

Gly Gln Glu His Thr Pro Gly Thr Arg Ile Gln Glu Gly Ser Arg Asp
            645              650              655

Asn Asn Glu Tyr Ile Ala Arg Arg Pro Asp Asn Gln Glu Gly Ala Phe
```

                                      1416

```
            660                      665                      670
```

Asp Pro Lys Glu Tyr Pro His Ser Ala Lys Asp Glu Ala His Pro Val
        675   680   685

Glu Ser Ala
    690

<210> 2996
<211> 390
<212> PRT
<213> Homo sapiens

<400> 2996

Met Ala Ser Pro Ala Ile Gly Gln Arg Pro Tyr Pro Leu Leu Leu Asp
1   5   10   15

Pro Glu Pro Pro Arg Tyr Leu Gln Ser Leu Ser Gly Pro Glu Leu Pro
            20   25   30

Pro Pro Pro Pro Asp Arg Ser Ser Arg Leu Cys Val Pro Ala Pro Leu
        35   40   45

Ser Thr Ala Pro Gly Ala Arg Glu Gly Arg Ser Ala Arg Arg Ala Ala
        50   55   60

Arg Gly Asn Leu Glu Pro Pro Arg Ala Ser Arg Pro Ala Arg Pro
65   70   75   80

Leu Arg Pro Gly Leu Gln Gln Arg Leu Arg Arg Pro Gly Ala Pro
                85   90   95

Arg Pro Arg Asp Val Arg Ser Ile Phe Glu Gln Pro Gln Asp Pro Arg
                100   105   110

Val Pro Ala Glu Arg Gly Glu Gly His Cys Phe Ala Glu Leu Val Leu
        115   120   125

Pro Gly Gly Pro Gly Trp Cys Asp Leu Cys Gly Arg Glu Val Leu Arg
    130   135   140

Gln Ala Leu Arg Cys Thr Asn Cys Lys Phe Thr Cys His Pro Glu Cys
145   150   155   160

Arg Ser Leu Ile Gln Leu Asp Cys Ser Gln Gln Glu Gly Leu Ser Arg
                165   170   175

1417

Asp Arg Pro Ser Pro Glu Ser Thr Leu Thr Val Thr Phe Ser Gln Asn
            180   185   190

Val Cys Lys Pro Val Glu Glu Thr Gln Arg Pro Pro Thr Leu Gln Glu
            195   200   205

Ile Lys Gln Lys Ile Asp Ser Tyr Asn Thr Arg Glu Lys Asn Cys Leu
    210   215   220

Gly Met Lys Leu Ser Glu Asp Gly Thr Tyr Thr Gly Phe Ile Lys Val
225   230   235   240

His Leu Lys Leu Arg Arg Pro Val Thr Val Pro Ala Gly Ile Arg Pro
            245   250   255

Gln Ser Ile Tyr Asp Ala Ile Lys Glu Val Asn Leu Ala Ala Thr Thr
            260   265   270

Asp Lys Arg Thr Ser Phe Tyr Leu Pro Leu Asp Ala Ile Lys Gln Leu
            275   280   285

His Ile Ser Ser Thr Thr Thr Val Ser Glu Val Ile Gln Gly Leu Leu
    290   295   300

Lys Lys Phe Met Val Val Asp Asn Pro Gln Lys Phe Ala Leu Phe Lys
305   310   315   320

Arg Ile His Lys Asp Gly Gln Val Leu Phe Gln Lys Leu Ser Ile Ala
            325   330   335

Asp Arg Pro Leu Tyr Leu Arg Leu Leu Ala Gly Pro Asp Thr Glu Val
            340   345   350

Leu Ser Phe Val Leu Lys Glu Asn Glu Thr Gly Glu Val Glu Trp Asp
            355   360   365

Ala Phe Ser Ile Pro Glu Leu Gln Asn Phe Leu Ser Ser Trp Cys Ile
    370   375   380

Gln Ile Tyr Leu Tyr Tyr
385   390

<210> 2997
<211> 297
<212> PRT
<213> Homo sapiens

1418

<400> 2997

Met Thr Thr Pro Arg Asn Ser Val Asn Gly Thr Phe Pro Ala Glu Pro
1   5   10   15

Met Lys Gly Pro Ile Ala Met Gln Ser Gly Pro Lys Pro Leu Phe Arg
                20   25   30

Arg Met Ser Ser Leu Val Gly Pro Thr Gln Ser Phe Phe Met Arg Glu
            35   40   45

Ser Lys Thr Leu Gly Ala Val Gln Ile Met Asn Gly Leu Phe His Ile
        50   55   60

Ala Leu Gly Gly Leu Leu Met Ile Pro Ala Gly Ile Tyr Ala Pro Ile
65   70   75   80

Cys Val Thr Val Trp Tyr Pro Leu Trp Gly Gly Ile Met Tyr Ile Ile
                85   90   95

Ser Gly Ser Leu Leu Ala Ala Thr Glu Lys Asn Ser Arg Lys Cys Leu
                100   105   110

Val Lys Gly Lys Met Ile Met Asn Ser Leu Ser Leu Phe Ala Ala Ile
        115   120   125

Ser Gly Met Ile Leu Ser Ile Met Asp Ile Leu Asn Ile Lys Ile Ser
        130   135   140

His Phe Leu Lys Met Glu Ser Leu Asn Phe Ile Arg Ala His Thr Pro
145   150   155   160

Tyr Ile Asn Ile Tyr Asn Cys Glu Pro Ala Asn Pro Ser Glu Lys Asn
                165   170   175

Ser Pro Ser Thr Gln Tyr Cys Tyr Ser Ile Gln Ser Leu Phe Leu Gly
            180   185   190

Ile Leu Ser Val Met Leu Ile Phe Ala Phe Phe Gln Glu Leu Val Ile
        195   200   205

Ala Gly Ile Val Glu Asn Glu Trp Lys Arg Thr Cys Ser Arg Pro Lys
    210   215   220

Ser Asn Ile Val Leu Leu Ser Ala Glu Glu Lys Lys Glu Gln Thr Ile
225   230   235   240

Glu Ile Lys Glu Glu Val Val Gly Leu Thr Glu Thr Ser Ser Gln Pro
                245   250   255

Lys Asn Glu Glu Asp Ile Glu Ile Ile Pro Ile Gln Glu Glu Glu Glu
            260   265   270

Glu Glu Thr Glu Thr Asn Phe Pro Glu Pro Pro Gln Asp Gln Glu Ser
            275   280   285

Ser Pro Ile Glu Asn Asp Ser Ser Pro
        290   295

<210> 2998
<211> 261
<212> PRT
<213> Homo sapiens

<400> 2998

Met Ser Trp Lys Lys Ala Leu Arg Ile Pro Gly Gly Leu Arg Ala Ala
1   5   10   15

Thr Val Thr Leu Met Leu Ser Met Leu Ser Thr Pro Val Ala Glu Gly
            20   25   30

Arg Asp Ser Pro Glu Asp Phe Val Tyr Gln Phe Lys Gly Met Cys Tyr
            35   40   45

Phe Thr Asn Gly Thr Glu Arg Val Arg Leu Val Ser Arg Ser Ile Tyr
        50   55   60

Asn Arg Glu Glu Ile Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
65   70   75   80

Ala Val Thr Leu Leu Gly Leu Pro Ala Ala Glu Tyr Trp Asn Ser Gln
            85   90   95

Lys Asp Ile Leu Glu Arg Lys Arg Ala Ala Val Asp Arg Val Cys Arg
            100   105   110

His Asn Tyr Gln Leu Glu Leu Arg Thr Thr Leu Gln Arg Arg Val Glu
            115   120   125

Pro Thr Val Thr Ile Ser Pro Ser Arg Thr Glu Ala Leu Asn His His
        130   135   140

```
Asn Leu Leu Val Cys Ser Val Thr Asp Phe Tyr Pro Ala Gln Ile Lys
145             150             155             160


Val Arg Trp Phe Arg Asn Asp Gln Glu Glu Thr Ala Gly Val Val Ser
                165             170             175


Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Phe Gln Ile Leu Val Met
            180             185             190


Leu Glu Met Thr Pro Gln Arg Gly Asp Val Tyr Thr Cys His Val Glu
            195             200             205


His Pro Ser Leu Gln Ser Pro Ile Thr Val Glu Trp Arg Ala Gln Ser
        210             215             220


Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Ile Gly Gly Phe Val Leu
225             230             235             240


Gly Leu Ile Phe Leu Gly Leu Gly Leu Ile Ile His His Arg Ser Gln
            245             250             255


Lys Gly Leu Leu His
        260
```

```
<210>   2999
<211>   258
<212>   PRT
<213>   Homo sapiens

<400>   2999
```

```
Met Met Val Leu Gln Val Ser Ala Ala Pro Arg Thr Val Ala Leu Thr
1               5               10              15


Ala Leu Leu Met Val Leu Leu Thr Ser Val Val Gln Gly Arg Ala Thr
            20              25              30


Pro Glu Asn Tyr Leu Phe Gln Gly Arg Gln Glu Cys Tyr Ala Phe Asn
        35              40              45


Gly Thr Gln Arg Phe Leu Glu Arg Tyr Ile Tyr Asn Arg Glu Glu Phe
    50              55              60


Ala Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
65              70              75              80


Gly Arg Pro Ala Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
            85              90              95
```

```
Glu Lys Arg Ala Val Pro Asp Arg Met Cys Arg His Asn Tyr Glu Leu
            100                     105             110


Gly Gly Pro Met Thr Leu Gln Arg Arg Val Gln Pro Arg Val Asn Val
            115                 120             125


Ser Pro Ser Lys Lys Gly Pro Leu Gln His His Asn Leu Leu Val Cys
            130             135             140


His Val Thr Asp Phe Tyr Pro Gly Ser Ile Gln Val Arg Trp Phe Leu
145                     150             155                 160


Asn Gly Gln Glu Glu Thr Ala Gly Val Val Ser Thr Asn Leu Ile Arg
                165                 170                 175


Asn Gly Asp Trp Thr Phe Gln Ile Leu Val Met Leu Glu Met Thr Pro
            180                 185                 190


Gln Gln Gly Asp Val Tyr Thr Cys Gln Val Glu His Thr Ser Leu Asp
            195                 200                 205


Ser Pro Val Thr Val Glu Trp Lys Ala Gln Ser Asp Ser Ala Arg Ser
            210                 215                 220


Lys Thr Leu Thr Gly Ala Gly Gly Phe Val Leu Gly Leu Ile Ile Cys
225                     230                 235                 240


Gly Val Gly Ile Phe Met His Arg Arg Ser Lys Lys Val Gln Arg Gly
                245                 250                 255


Ser Ala



<210>    3000
<211>    175
<212>    PRT
<213>    Homo sapiens


<400>    3000


Met Thr Asp Cys Glu Phe Gly Tyr Ile Tyr Arg Leu Ala Gln Asp Tyr
1               5                   10                  15


Leu Gln Cys Val Leu Gln Ile Pro Gln Pro Gly Ser Gly Pro Ser Lys
            20                  25                  30
```

Thr Ser Arg Val Leu Gln Asn Val Ala Phe Ser Val Gln Lys Glu Val
        35   40   45

Glu Lys Asn Leu Lys Ser Cys Leu Asp Asn Val Asn Val Val Ser Val
        50   55   60

Asp Thr Ala Arg Thr Leu Phe Asn Gln Val Met Glu Lys Glu Phe Glu
65   70   75   80

Asp Gly Ile Ile Asn Trp Gly Arg Ile Val Thr Ile Phe Ala Phe Glu
                    85   90   95

Gly Ile Leu Ile Lys Lys Leu Leu Arg Gln Gln Ile Ala Pro Asp Val
                    100   105   110

Asp Thr Tyr Lys Glu Ile Ser Tyr Phe Val Ala Glu Phe Ile Met Asn
            115   120   125

Asn Thr Gly Glu Trp Ile Arg Gln Asn Gly Gly Trp Glu Asn Gly Phe
        130   135   140

Val Lys Lys Phe Glu Pro Lys Ser Gly Trp Met Thr Phe Leu Glu Val
145   150   155   160

Thr Gly Lys Ile Cys Glu Met Leu Ser Leu Leu Lys Gln Tyr Cys
                    165   170   175

<210>   3001
<211>   825
<212>   PRT
<213>   Homo sapiens

<400>   3001

Met Gly Trp Leu Cys Ser Gly Leu Leu Phe Pro Val Ser Cys Leu Val
1   5   10   15

Leu Leu Gln Val Ala Ser Ser Gly Asn Met Lys Val Leu Gln Glu Pro
            20   25   30

Thr Cys Val Ser Asp Tyr Met Ser Ile Ser Thr Cys Glu Trp Lys Met
        35   40   45

Asn Gly Pro Thr Asn Cys Ser Thr Glu Leu Arg Leu Leu Tyr Gln Leu
        50   55   60

Val Phe Leu Leu Ser Glu Ala His Thr Cys Ile Pro Glu Asn Asn Gly
65   70   75   80

```
Gly Ala Gly Cys Val Cys His Leu Leu Met Asp Asp Val Val Ser Ala
              85                  90                  95

Asp Asn Tyr Thr Leu Asp Leu Trp Ala Gly Gln Gln Leu Leu Trp Lys
            100                 105                 110

Gly Ser Phe Lys Pro Ser Glu His Val Lys Pro Arg Ala Pro Gly Asn
            115                 120                 125

Leu Thr Val His Thr Asn Val Ser Asp Thr Leu Leu Leu Thr Trp Ser
        130                 135                 140

Asn Pro Tyr Pro Pro Asp Asn Tyr Leu Tyr Asn His Leu Thr Tyr Ala
145                 150                 155                 160

Val Asn Ile Trp Ser Glu Asn Asp Pro Ala Asp Phe Arg Ile Tyr Asn
                165                 170                 175

Val Thr Tyr Leu Glu Pro Ser Leu Arg Ile Ala Ala Ser Thr Leu Lys
            180                 185                 190

Ser Gly Ile Ser Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln Cys Tyr
            195                 200                 205

Asn Thr Thr Trp Ser Glu Trp Ser Pro Ser Thr Lys Trp His Asn Ser
210                 215                 220

Tyr Arg Glu Pro Phe Glu Gln His Leu Leu Leu Gly Val Ser Val Ser
225                 230                 235                 240

Cys Ile Val Ile Leu Ala Val Cys Leu Leu Cys Tyr Val Ser Ile Thr
                245                 250                 255

Lys Ile Lys Lys Glu Trp Trp Asp Gln Ile Pro Asn Pro Ala Arg Ser
            260                 265                 270

Arg Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Gly Ser Gln Trp Glu
            275                 280                 285

Lys Arg Ser Arg Gly Gln Glu Pro Ala Lys Cys Pro His Trp Lys Asn
    290                 295                 300

Cys Leu Thr Lys Leu Leu Pro Cys Phe Leu Glu His Asn Met Lys Arg
305                 310                 315                 320
```

Asp Glu Asp Pro His Lys Ala Ala Lys Glu Met Pro Phe Gln Gly Ser
                325   330   335

Gly Lys Ser Ala Trp Cys Pro Val Glu Ile Ser Lys Thr Val Leu Trp
                340   345   350

Pro Glu Ser Ile Ser Val Val Arg Cys Val Glu Leu Phe Glu Ala Pro
                355   360   365

Val Glu Cys Glu Glu Glu Glu Glu Val Glu Glu Glu Lys Gly Ser Phe
    370   375   380

Cys Ala Ser Pro Glu Ser Ser Arg Asp Asp Phe Gln Glu Gly Arg Glu
385   390   395   400

Gly Ile Val Ala Arg Leu Thr Glu Ser Leu Phe Leu Asp Leu Leu Gly
                405   410   415

Glu Glu Asn Gly Gly Phe Cys Gln Gln Asp Met Gly Glu Ser Cys Leu
                420   425   430

Leu Pro Pro Ser Gly Ser Thr Ser Ala His Met Pro Trp Asp Glu Phe
                435   440   445

Pro Ser Ala Gly Pro Lys Glu Ala Pro Pro Trp Gly Lys Glu Gln Pro
    450   455   460

Leu His Leu Glu Pro Ser Pro Pro Ala Ser Pro Thr Gln Ser Pro Asp
465   470   475   480

Asn Leu Thr Cys Thr Glu Thr Pro Leu Val Ile Ala Gly Asn Pro Ala
                485   490   495

Tyr Arg Ser Phe Ser Asn Ser Leu Ser Gln Ser Pro Cys Pro Arg Glu
                500   505   510

Leu Gly Pro Asp Pro Leu Leu Ala Arg His Leu Glu Glu Val Glu Pro
    515   520   525

Glu Met Pro Cys Val Pro Gln Leu Ser Glu Pro Thr Thr Val Pro Gln
    530   535   540

Pro Glu Pro Glu Thr Trp Glu Gln Ile Leu Arg Arg Asn Val Leu Gln
545   550   555   560

His Gly Ala Ala Ala Ala Pro Val Ser Ala Pro Thr Ser Gly Tyr Gln
              565   570   575

Glu Phe Val His Ala Val Glu Gln Gly Gly Thr Gln Ala Ser Ala Val
          580   585   590

Val Gly Leu Gly Pro Pro Gly Glu Ala Gly Tyr Lys Ala Phe Ser Ser
          595   600   605

Leu Leu Ala Ser Ser Ala Val Ser Pro Glu Lys Cys Gly Phe Gly Ala
    610   615   620

Ser Ser Gly Glu Glu Gly Tyr Lys Pro Phe Gln Asp Leu Ile Pro Gly
625   630   635   640

Cys Pro Gly Asp Pro Ala Pro Val Pro Val Pro Leu Phe Thr Phe Gly
              645   650   655

Leu Asp Arg Glu Pro Pro Arg Ser Pro Gln Ser Ser His Leu Pro Ser
          660   665   670

Ser Ser Pro Glu His Leu Gly Leu Glu Pro Gly Glu Lys Val Glu Asp
          675   680   685

Met Pro Lys Pro Pro Leu Pro Gln Glu Gln Ala Thr Asp Pro Leu Val
    690   695   700

Asp Ser Leu Gly Ser Gly Ile Val Tyr Ser Ala Leu Thr Cys His Leu
705   710   715   720

Cys Gly His Leu Lys Gln Cys His Gly Gln Glu Asp Gly Gly Gln Thr
              725   730   735

Pro Val Met Ala Ser Pro Cys Cys Gly Cys Cys Cys Gly Asp Arg Ser
          740   745   750

Ser Pro Pro Thr Thr Pro Leu Arg Ala Pro Asp Pro Ser Pro Gly Gly
          755   760   765

Val Pro Leu Glu Ala Ser Leu Cys Pro Ala Ser Leu Ala Pro Ser Gly
          770   775   780

Ile Ser Glu Lys Ser Lys Ser Ser Ser Ser Phe His Pro Ala Pro Gly
785   790   795   800

Asn Ala Gln Ser Ser Ser Gln Thr Pro Lys Ile Val Asn Phe Val Ser

```
              805                    810                      815
```

Val Gly Pro Thr Tyr Met Arg Val Ser
          820   825

<210> 3002
<211> 285
<212> PRT
<213> Homo sapiens

<400> 3002

Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
1   5   10   15

Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
          20   25   30

Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
          35   40   45

Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
    50   55   60

Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
65   70   75   80

Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
              85   90   95

Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
          100   105   110

Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
          115   120   125

Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
    130   135   140

Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
145   150   155   160

Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
              165   170   175

Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
          180   185   190

Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
        195   200   205

Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
    210   215   220

Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
225   230   235   240

Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
            245   250   255

Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
            260   265   270

Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
        275   280   285

<210> 3003
<211> 444
<212> PRT
<213> Homo sapiens

<400> 3003

Met Ala Val Thr Thr Arg Leu Thr Arg Leu His Glu Lys Ile Leu Gln
1   5   10   15

Asn His Phe Gly Gly Lys Arg Leu Ser Leu Leu Tyr Lys Gly Ser Val
        20   25   30

His Gly Phe Arg Asn Gly Val Leu Leu Asp Arg Cys Cys Asn Gln Gly
        35   40   45

Pro Thr Leu Thr Val Ile Tyr Ser Glu Asp His Ile Ile Gly Ala Tyr
    50   55   60

Ala Glu Glu Ser Tyr Gln Glu Gly Lys Tyr Ala Ser Ile Ile Leu Phe
65   70   75   80

Ala Leu Gln Asp Thr Lys Ile Ser Glu Trp Lys Leu Gly Leu Cys Thr
            85   90   95

Pro Glu Thr Leu Phe Cys Cys Asp Val Thr Lys Tyr Asn Ser Pro Thr
        100   105   110

Asn Phe Gln Ile Asp Gly Arg Asn Arg Lys Val Ile Met Asp Leu Lys

```
              115                    120                      125

   Thr Met Glu Asn Leu Gly Leu Ala Gln Asn Cys Thr Ile Ser Ile Gln
       130                     135                 140

   Asp Tyr Glu Val Phe Arg Cys Glu Asp Ser Leu Asp Glu Arg Lys Ile
       145                 150                 155                 160

   Lys Gly Val Ile Glu Leu Arg Lys Ser Leu Leu Ser Ala Leu Arg Thr
                       165                 170                 175

   Tyr Glu Pro Tyr Gly Ser Leu Val Gln Gln Ile Arg Ile Leu Leu Leu
                   180                 185                 190

   Gly Pro Ile Gly Ala Gly Lys Ser Ser Phe Phe Asn Ser Val Arg Ser
               195                 200                 205

   Val Phe Gln Gly His Val Thr His Gln Ala Leu Val Gly Thr Asn Thr
       210                 215                 220

   Thr Gly Ile Ser Glu Lys Tyr Arg Thr Tyr Ser Ile Arg Asp Gly Lys
   225                 230                 235                 240

   Asp Gly Lys Tyr Leu Pro Phe Ile Leu Cys Asp Ser Leu Gly Leu Ser
                   245                 250                 255

   Glu Lys Glu Gly Gly Leu Cys Arg Asp Asp Ile Phe Tyr Ile Leu Asn
                   260                 265                 270

   Gly Asn Ile Arg Asp Arg Tyr Gln Phe Asn Pro Met Glu Ser Ile Lys
               275                 280                 285

   Leu Asn His His Asp Tyr Ile Asp Ser Pro Ser Leu Lys Asp Arg Ile
       290                 295                 300

   His Cys Val Ala Phe Val Phe Asp Ala Ser Ser Ile Gln Tyr Phe Ser
   305                 310                 315                 320

   Ser Gln Met Ile Val Lys Ile Lys Arg Ile Arg Arg Glu Leu Val Asn
                   325                 330                 335

   Ala Gly Val Val His Val Ala Leu Leu Thr His Val Asp Ser Met Asp
               340                 345                 350

   Leu Ile Thr Lys Gly Asp Leu Ile Glu Ile Glu Arg Cys Glu Pro Val
           355                 360                 365
```

```
Arg Ser Lys Leu Glu Glu Val Gln Arg Lys Leu Gly Phe Ala Leu Ser
    370             375             380

Asp Ile Ser Val Val Ser Asn Tyr Ser Ser Glu Trp Glu Leu Asp Pro
385             390             395             400

Val Lys Asp Val Leu Ile Leu Ser Ala Leu Arg Arg Met Leu Trp Ala
            405             410             415

Ala Asp Asp Phe Leu Glu Asp Leu Pro Phe Glu Gln Ile Gly Asn Leu
            420             425             430

Arg Glu Glu Ile Ile Asn Cys Ala Gln Gly Lys Lys
            435             440
```

```
<210>   3004
<211>   432
<212>   PRT
<213>   Homo sapiens

<400>   3004
```

```
Met Gly Pro Ala Gly Ser Leu Leu Gly Ser Gly Gln Met Gln Ile Thr
1               5               10              15

Leu Trp Gly Ser Leu Ala Ala Val Ala Ile Phe Phe Val Ile Thr Phe
            20              25              30

Leu Ile Phe Pro Cys Ser Ser Cys Asp Arg Glu Lys Lys Pro Arg Gln
            35              40              45

His Ser Gly Asp His Glu Asn Leu Met Asn Val Pro Ser Asp Lys Glu
    50              55              60

Met Phe Ser Arg Ser Val Thr Ser Leu Ala Thr Asp Ala Pro Ala Ser
65              70              75              80

Ser Glu Gln Asn Gly Ala Leu Thr Asn Gly Asp Ile Leu Ser Glu Asp
            85              90              95

Ser Thr Leu Thr Cys Met Gln His Tyr Glu Glu Val Gln Thr Ser Ala
            100             105             110

Ser Asp Leu Leu Asp Ser Gln Asp Ser Thr Gly Lys Pro Lys Cys His
            115             120             125
```

```
    Gln Ser Arg Glu Leu Pro Arg Ile Pro Pro Glu Ser Ala Val Asp Thr
        130                 135                 140


    Met Leu Thr Ala Arg Ser Val Asp Gly Asp Gln Gly Leu Gly Met Glu
    145                 150                 155                 160


    Gly Pro Tyr Glu Val Leu Lys Asp Ser Ser Ser Gln Glu Asn Met Val
                    165                 170                 175


    Glu Asp Cys Leu Tyr Glu Thr Val Lys Glu Ile Lys Glu Val Ala Ala
                    180                 185                 190


    Ala Ala His Leu Glu Lys Gly His Ser Gly Lys Ala Lys Ser Thr Ser
            195                 200                 205


    Ala Ser Lys Glu Leu Pro Gly Pro Gln Thr Glu Gly Lys Ala Glu Phe
    210                 215                 220


    Ala Glu Tyr Ala Ser Val Asp Arg Asn Lys Lys Cys Arg Gln Ser Val
    225                 230                 235                 240


    Asn Val Glu Ser Ile Leu Gly Asn Ser Cys Asp Pro Glu Glu Glu Ala
                    245                 250                 255


    Pro Pro Pro Val Pro Val Lys Leu Leu Asp Glu Asn Glu Asn Leu Gln
                    260                 265                 270


    Glu Lys Glu Gly Gly Glu Ala Glu Glu Ser Ala Thr Asp Thr Thr Ser
            275                 280                 285


    Glu Thr Asn Lys Arg Phe Ser Ser Leu Ser Tyr Lys Ser Arg Glu Glu
        290                 295                 300


    Asp Pro Thr Leu Thr Glu Glu Glu Ile Ser Ala Met Tyr Ser Ser Val
    305                 310                 315                 320


    Asn Lys Pro Gly Gln Leu Val Asn Lys Ser Gly Gln Ser Leu Thr Val
                    325                 330                 335


    Pro Glu Ser Thr Tyr Thr Ser Ile Gln Gly Asp Pro Gln Arg Ser Pro
                    340                 345                 350


    Ser Ser Cys Asn Asp Leu Tyr Ala Thr Val Lys Asp Phe Glu Lys Thr
            355                 360                 365


    Pro Asn Ser Thr Leu Pro Pro Ala Gly Arg Pro Ser Glu Glu Pro Glu
```

1431

```
            370                      375                      380
```

```
   Pro Asp Tyr Glu Ala Ile Gln Thr Leu Asn Arg Glu Glu Glu Lys Ala
   385                 390                 395                 400
```

```
   Thr Leu Gly Thr Asn Gly His His Gly Leu Val Pro Lys Glu Asn Asp
                       405                 410                 415
```

```
   Tyr Glu Ser Ile Ser Asp Leu Gln Gln Gly Arg Asp Ile Thr Arg Leu
                       420                 425                 430
```

```
   <210>  3005
   <211>  501
   <212>  PRT
   <213>  Homo sapiens
```

```
   <400>  3005
```

```
   Met Ile Ile Ser His Phe Pro Lys Cys Val Ala Val Phe Ala Leu Leu
   1                   5                   10                  15
```

```
   Ala Leu Ser Val Gly Ala Leu Asp Thr Phe Ile Ala Ala Val Tyr Glu
                       20                  25                  30
```

```
   His Ala Val Ile Leu Pro Asn Arg Thr Glu Thr Pro Val Ser Lys Glu
                       35                  40                  45
```

```
   Glu Ala Leu Leu Leu Met Asn Lys Asn Ile Asp Val Leu Glu Lys Ala
       50                  55                  60
```

```
   Val Lys Leu Ala Ala Lys Gln Gly Ala His Ile Ile Val Thr Pro Glu
   65                  70                  75                  80
```

```
   Asp Gly Ile Tyr Gly Trp Ile Phe Thr Arg Glu Ser Ile Tyr Pro Tyr
                       85                  90                  95
```

```
   Leu Glu Asp Ile Pro Asp Pro Gly Val Asn Trp Ile Pro Cys Arg Asp
                       100                 105                 110
```

```
   Pro Trp Arg Phe Gly Asn Thr Pro Val Gln Gln Arg Leu Ser Cys Leu
       115                 120                 125
```

```
   Ala Lys Asp Asn Ser Ile Tyr Val Val Ala Asn Ile Gly Asp Lys Lys
       130                 135                 140
```

```
   Pro Cys Asn Ala Ser Asp Ser Gln Cys Pro Pro Asp Gly Arg Tyr Gln
   145                 150                 155                 160
```

```
Tyr Asn Thr Asp Val Val Phe Asp Ser Gln Gly Lys Leu Leu Ala Arg
            165             170                 175


Tyr His Lys Tyr Asn Leu Phe Ala Pro Glu Ile Gln Phe Asp Phe Pro
            180             185                 190


Lys Asp Ser Glu Leu Val Thr Phe Asp Thr Pro Phe Gly Lys Phe Gly
            195             200                 205


Ile Phe Thr Cys Phe Asp Ile Phe Ser His Asp Pro Ala Ala Val Val
    210             215             220


Val Asp Glu Val Ser Ile Asp Ser Ile Leu Tyr Pro Thr Ala Trp Tyr
225             230             235                 240


Asn Thr Leu Pro Leu Leu Ser Ala Val Pro Phe His Ser Ala Trp Ala
            245             250                 255


Lys Ala Met Gly Val Asn Leu Leu Ala Ala Asn Thr His Asn Thr Ser
            260             265                 270


Met His Met Thr Gly Ser Gly Ile Tyr Ala Pro Glu Ala Val Lys Val
    275             280             285


Tyr His Tyr Asp Met Glu Thr Glu Ser Gly Gln Leu Leu Leu Ser Glu
290             295                 300


Leu Lys Ser Arg Pro Arg Arg Glu Pro Thr Tyr Pro Ala Ala Val Asp
305             310             315                 320


Trp His Ala Tyr Ala Ser Ser Val Lys Pro Phe Ser Ser Glu Gln Ser
            325             330                 335


Asp Phe Leu Gly Met Ile Tyr Phe Asp Glu Phe Thr Phe Thr Lys Leu
            340             345                 350


Lys Arg Asn Thr Gly Asn Tyr Thr Ala Cys Gln Lys Asp Leu Cys Cys
            355             360                 365


His Leu Thr Tyr Lys Met Ser Glu Lys Arg Thr Asp Glu Ile Tyr Ala
    370             375                 380


Leu Gly Ala Phe Asp Gly Leu His Thr Val Glu Gly Gln Tyr Tyr Leu
385             390                 395                 400
```

1433

```
    Gln Ile Cys Ala Leu Leu Lys Cys Gln Thr Thr Asp Leu Glu Thr Cys
                    405                 410                 415

    Gly Glu Pro Val Gly Ser Ala Phe Thr Lys Phe Glu Asp Phe Ser Leu
                    420                 425                 430

    Ser Gly Thr Phe Gly Thr Arg Tyr Val Phe Pro Gln Ile Ile Leu Ser
                    435                 440                 445

    Gly Ser Gln Leu Ala Pro Glu Arg His Tyr Glu Ile Ser Arg Asp Gly
            450                 455                 460

    Arg Leu Arg Ser Arg Ser Gly Ala Pro Leu Pro Val Leu Val Met Ala
    465                 470                 475                 480

    Leu Tyr Gly Arg Val Phe Glu Lys Asp Pro Pro Arg Leu Gly Gln Gly
                    485                 490                 495

    Ser Gly Lys Phe Gln
                    500
```

```
<210>   3006
<211>   329
<212>   PRT
<213>   Homo sapiens

<400>   3006
```

```
    Met Trp Gly Leu Lys Val Leu Leu Leu Pro Val Val Ser Phe Ala Leu
    1               5                   10                  15

    Tyr Pro Glu Glu Ile Leu Asp Thr His Trp Glu Leu Trp Lys Lys Thr
                    20                  25                  30

    His Arg Lys Gln Tyr Asn Asn Lys Val Asp Glu Ile Ser Arg Arg Leu
            35                  40                  45

    Ile Trp Glu Lys Asn Leu Lys Tyr Ile Ser Ile His Asn Leu Glu Ala
        50                  55                  60

    Ser Leu Gly Val His Thr Tyr Glu Leu Ala Met Asn His Leu Gly Asp
    65                  70                  75                  80

    Met Thr Ser Glu Glu Val Val Gln Lys Met Thr Gly Leu Lys Val Pro
                    85                  90                  95

    Leu Ser His Ser Arg Ser Asn Asp Thr Leu Tyr Ile Pro Glu Trp Glu
                    100                 105                 110
```

```
Gly Arg Ala Pro Asp Ser Val Asp Tyr Arg Lys Lys Gly Tyr Val Thr
    115             120             125


Pro Val Lys Asn Gln Gly Gln Cys Gly Ser Cys Trp Ala Phe Ser Ser
    130             135             140


Val Gly Ala Leu Glu Gly Gln Leu Lys Lys Lys Thr Gly Lys Leu Leu
145             150             155             160


Asn Leu Ser Pro Gln Asn Leu Val Asp Cys Val Ser Glu Asn Asp Gly
            165             170             175


Cys Gly Gly Gly Tyr Met Thr Asn Ala Phe Gln Tyr Val Gln Lys Asn
            180             185             190


Arg Gly Ile Asp Ser Glu Asp Ala Tyr Pro Tyr Val Gly Gln Glu Glu
            195             200             205


Ser Cys Met Tyr Asn Pro Thr Gly Lys Ala Ala Lys Cys Arg Gly Tyr
    210             215             220


Arg Glu Ile Pro Glu Gly Asn Glu Lys Ala Leu Lys Arg Ala Val Ala
225             230             235             240


Arg Val Gly Pro Val Ser Val Ala Ile Asp Ala Ser Leu Thr Ser Phe
            245             250             255


Gln Phe Tyr Ser Lys Gly Val Tyr Tyr Asp Glu Ser Cys Asn Ser Asp
            260             265             270


Asn Leu Asn His Ala Val Leu Ala Val Gly Tyr Gly Ile Gln Lys Gly
            275             280             285


Asn Lys His Trp Ile Ile Lys Asn Ser Trp Gly Glu Asn Trp Gly Asn
    290             295             300


Lys Gly Tyr Ile Leu Met Ala Arg Asn Lys Asn Asn Ala Cys Gly Ile
305             310             315             320


Ala Asn Leu Ala Ser Phe Pro Lys Met
            325
```

```
<210>   3007
<211>   1170
<212>   PRT
```

```
<213>   Homo sapiens

<400>   3007

Met Lys Asp Ser Cys Ile Thr Val Met Ala Met Ala Leu Leu Ser Gly
1               5               10                  15


Phe Phe Phe Phe Ala Pro Ala Ser Ser Tyr Asn Leu Asp Val Arg Gly
            20              25                  30


Ala Arg Ser Phe Ser Pro Pro Arg Ala Gly Arg His Phe Gly Tyr Arg
        35              40                  45


Val Leu Gln Val Gly Asn Gly Val Ile Val Gly Ala Pro Gly Glu Gly
    50              55                  60


Asn Ser Thr Gly Ser Leu Tyr Gln Cys Gln Ser Gly Thr Gly His Cys
65              70              75                  80


Leu Pro Val Thr Leu Arg Gly Ser Asn Tyr Thr Ser Lys Tyr Leu Gly
            85              90                  95


Met Thr Leu Ala Thr Asp Pro Thr Asp Gly Ser Ile Leu Ala Cys Asp
        100             105                 110


Pro Gly Leu Ser Arg Thr Cys Asp Gln Asn Thr Tyr Leu Ser Gly Leu
    115             120                 125


Cys Tyr Leu Phe Arg Gln Asn Leu Gln Gly Pro Met Leu Gln Gly Arg
    130             135                 140


Pro Gly Phe Gln Glu Cys Ile Lys Gly Asn Val Asp Leu Val Phe Leu
145             150                 155                 160


Phe Asp Gly Ser Met Ser Leu Gln Pro Asp Glu Phe Gln Lys Ile Leu
            165                 170                 175


Asp Phe Met Lys Asp Val Met Lys Lys Leu Ser Asn Thr Ser Tyr Gln
        180             185                 190


Phe Ala Ala Val Gln Phe Ser Thr Ser Tyr Lys Thr Glu Phe Asp Phe
        195             200                 205


Ser Asp Tyr Val Lys Trp Lys Asp Pro Asp Ala Leu Leu Lys His Val
    210             215                 220


Lys His Met Leu Leu Leu Thr Asn Thr Phe Gly Ala Ile Asn Tyr Val
```

225   230   235   240

Ala Thr Glu Val Phe Arg Glu Glu Leu Gly Ala Arg Pro Asp Ala Thr
                    245   250   255

Lys Val Leu Ile Ile Ile Thr Asp Gly Glu Ala Thr Asp Ser Gly Asn
                    260   265   270

Ile Asp Ala Ala Lys Asp Ile Ile Arg Tyr Ile Ile Gly Ile Gly Lys
          275   280   285

His Phe Gln Thr Lys Glu Ser Gln Glu Thr Leu His Lys Phe Ala Ser
          290   295   300

Lys Pro Ala Ser Glu Phe Val Lys Ile Leu Asp Thr Phe Glu Lys Leu
305   310   315   320

Lys Asp Leu Phe Thr Glu Leu Gln Lys Lys Ile Tyr Val Ile Glu Gly
                    325   330   335

Thr Ser Lys Gln Asp Leu Thr Ser Phe Asn Met Glu Leu Ser Ser Ser
                    340   345   350

Gly Ile Ser Ala Asp Leu Ser Arg Gly His Ala Val Val Gly Ala Val
          355   360   365

Gly Ala Lys Asp Trp Ala Gly Gly Phe Leu Asp Leu Lys Ala Asp Leu
          370   375   380

Gln Asp Asp Thr Phe Ile Gly Asn Glu Pro Leu Thr Pro Glu Val Arg
385   390   395   400

Ala Gly Tyr Leu Gly Tyr Thr Val Thr Trp Leu Pro Ser Arg Gln Lys
                    405   410   415

Thr Ser Leu Leu Ala Ser Gly Ala Pro Arg Tyr Gln His Met Gly Arg
                    420   425   430

Val Leu Leu Phe Gln Glu Pro Gln Gly Gly Gly His Trp Ser Gln Val
                    435   440   445

Gln Thr Ile His Gly Thr Gln Ile Gly Ser Tyr Phe Gly Gly Glu Leu
          450   455   460

Cys Gly Val Asp Val Asp Gln Asp Gly Glu Thr Glu Leu Leu Leu Ile
465   470   475   480

```
Gly Ala Pro Leu Phe Tyr Gly Glu Gln Arg Gly Gly Arg Val Phe Ile
              485                 490                 495


Tyr Gln Arg Arg Gln Leu Gly Phe Glu Glu Val Ser Glu Leu Gln Gly
              500                 505                 510


Asp Pro Gly Tyr Pro Leu Gly Arg Phe Gly Glu Ala Ile Thr Ala Leu
              515                 520                 525


Thr Asp Ile Asn Gly Asp Gly Leu Val Asp Val Ala Val Gly Ala Pro
              530                 535                 540


Leu Glu Glu Gln Gly Ala Val Tyr Ile Phe Asn Gly Arg His Gly Gly
545                 550                 555                 560


Leu Ser Pro Gln Pro Ser Gln Arg Ile Glu Gly Thr Gln Val Leu Ser
              565                 570                 575


Gly Ile Gln Trp Phe Gly Arg Ser Ile His Gly Val Lys Asp Leu Glu
              580                 585                 590


Gly Asp Gly Leu Ala Asp Val Ala Val Gly Ala Glu Ser Gln Met Ile
              595                 600                 605


Val Leu Ser Ser Arg Pro Val Val Asp Met Val Thr Leu Met Ser Phe
610                 615                 620


Ser Pro Ala Glu Ile Pro Val His Glu Val Glu Cys Ser Tyr Ser Thr
625                 630                 635                 640


Ser Asn Lys Met Lys Glu Gly Val Asn Ile Thr Ile Cys Phe Gln Ile
              645                 650                 655


Lys Ser Leu Tyr Pro Gln Phe Gln Gly Arg Leu Val Ala Asn Leu Thr
              660                 665                 670


Tyr Thr Leu Gln Leu Asp Gly His Arg Thr Arg Arg Arg Gly Leu Phe
              675                 680                 685


Pro Gly Gly Arg His Glu Leu Arg Arg Asn Ile Ala Val Thr Thr Ser
              690                 695                 700


Met Ser Cys Thr Asp Phe Ser Phe His Phe Pro Val Cys Val Gln Asp
705                 710                 715                 720
```

1438

```
Leu Ile Ser Pro Ile Asn Val Ser Leu Asn Phe Ser Leu Trp Glu Glu
              725             730             735

Glu Gly Thr Pro Arg Asp Gln Arg Ala Gln Gly Lys Asp Ile Pro Pro
              740             745             750

Ile Leu Arg Pro Ser Leu His Ser Glu Thr Trp Glu Ile Pro Phe Glu
              755             760             765

Lys Asn Cys Gly Glu Asp Lys Lys Cys Glu Ala Asn Leu Arg Val Ser
    770             775             780

Phe Ser Pro Ala Arg Ser Arg Ala Leu Arg Leu Thr Ala Phe Ala Ser
785             790             795             800

Leu Ser Val Glu Leu Ser Leu Ser Asn Leu Glu Glu Asp Ala Tyr Trp
              805             810             815

Val Gln Leu Asp Leu His Phe Pro Pro Gly Leu Ser Phe Arg Lys Val
              820             825             830

Glu Met Leu Lys Pro His Ser Gln Ile Pro Val Ser Cys Glu Glu Leu
              835             840             845

Pro Glu Glu Ser Arg Leu Leu Ser Arg Ala Leu Ser Cys Asn Val Ser
    850             855             860

Ser Pro Ile Phe Lys Ala Gly His Ser Val Ala Leu Gln Met Met Phe
865.            870             875             880

Asn Thr Leu Val Asn Ser Ser Trp Gly Asp Ser Val Glu Leu His Ala
              885             890             895

Asn Val Thr Cys Asn Asn Glu Asp Ser Asp Leu Leu Glu Asp Asn Ser
              900             905             910

Ala Thr Thr Ile Ile Pro Ile Leu Tyr Pro Ile Asn Ile Leu Ile Gln
    915             920             925

Asp Gln Glu Asp Ser Thr Leu Tyr Val Ser Phe Thr Pro Lys Gly Pro
    930             935             940

Lys Ile His Gln Val Lys His Met Tyr Gln Val Arg Ile Gln Pro Ser
945             950             955             960
```

```
Ile His Asp His Asn Ile Pro Thr Leu Glu Ala Val Val Gly Val Pro
             965             970                  975

Gln Pro Pro Ser Glu Gly Pro Ile Thr His Gln Trp Ser Val Gln Met
             980             985                  990

Glu Pro Pro Val Pro Cys His Tyr Glu Asp Leu Glu Arg Leu Pro Asp
             995             1000                 1005

Ala Ala Glu Pro Cys Leu Pro Gly Ala Leu Phe Arg Cys Pro Val
    1010             1015             1020

Val Phe Arg Gln Glu Ile Leu Val Gln Val Ile Gly Thr Leu Glu
    1025             1030             1035

Leu Val Gly Glu Ile Glu Ala Ser Ser Met Phe Ser Leu Cys Ser
    1040             1045             1050

Ser Leu Ser Ile Ser Phe Asn Ser Ser Lys His Phe His Leu Tyr
    1055             1060             1065

Gly Ser Asn Ala Ser Leu Ala Gln Val Val Met Lys Val Asp Val
    1070             1075             1080

Val Tyr Glu Lys Gln Met Leu Tyr Leu Tyr Val Leu Ser Gly Ile
    1085             1090             1095

Gly Gly Leu Leu Leu Leu Leu Leu Ile Phe Ile Val Leu Tyr Lys
    1100             1105             1110

Val Gly Phe Phe Lys Arg Asn Leu Lys Glu Lys Met Glu Ala Gly
    1115             1120             1125

Arg Gly Val Pro Asn Gly Ile Pro Ala Glu Asp Ser Glu Gln Leu
    1130             1135             1140

Ala Ser Gly Gln Glu Ala Gly Asp Pro Gly Cys Leu Lys Pro Leu
    1145             1150             1155

His Glu Lys Asp Ser Glu Ser Gly Gly Gly Lys Asp
    1160             1165             1170
```

```
<210>  3008
<211>  502
<212>  PRT
<213>  Homo sapiens
```

<400> 3008

Met Ala Thr Asn Pro Gln Pro Gln Pro Pro Pro Pro Ala Pro Pro Pro
1   5   10   15

Pro Pro Pro Gln Pro Gln Pro Gln Pro Pro Pro Pro Pro Gly Pro
            20   25   30

Gly Ala Gly Pro Gly Ala Gly Gly Ala Gly Gly Ala Gly Ala Gly Ala
        35   40   45

Gly Asp Pro Gln Leu Val Ala Met Ile Val Asn His Leu Lys Ser Gln
    50   55   60

Gly Leu Phe Asp Gln Phe Arg Arg Asp Cys Leu Ala Asp Val Asp Thr
65   70   75   80

Lys Pro Ala Tyr Gln Asn Leu Arg Gln Arg Val Asp Asn Phe Val Ala
                85   90   95

Asn His Leu Ala Thr His Thr Trp Ser Pro His Leu Asn Lys Asn Gln
            100   105   110

Leu Arg Asn Asn Ile Arg Gln Gln Val Leu Lys Ser Gly Met Leu Glu
        115   120   125

Ser Gly Ile Asp Arg Ile Ile Ser Gln Val Val Asp Pro Lys Ile Asn
    130   135   140

His Thr Phe Arg Pro Gln Val Glu Lys Ala Val His Glu Phe Leu Ala
145   150   155   160

Thr Leu Asn His Lys Glu Glu Gly Ser Gly Asn Thr Ala Pro Asp Asp
                165   170   175

Glu Lys Pro Asp Thr Ser Leu Ile Thr Gln Gly Val Pro Thr Pro Gly
            180   185   190

Pro Ser Ala Asn Val Ala Asn Asp Ala Met Ser Ile Leu Glu Thr Ile
        195   200   205

Thr Ser Leu Asn Gln Glu Ala Ser Ala Ala Arg Ala Ser Thr Glu Thr
    210   215   220

Ser Asn Ala Lys Thr Ser Glu Arg Ala Ser Lys Lys Leu Pro Ser Gln
225   230   235   240

Pro Thr Thr Asp Thr Ser Thr Asp Lys Glu Arg Thr Ser Glu Asp Met
                245   250   255

Ala Asp Lys Glu Lys Ser Thr Ala Asp Ser Gly Gly Glu Gly Leu Glu
            260   265   270

Thr Ala Pro Lys Ser Glu Glu Phe Ser Asp Leu Pro Cys Pro Val Glu
            275   280   285

Glu Ile Lys Asn Tyr Thr Lys Glu His Asn Asn Leu Ile Leu Leu Asn
    290   295   300

Lys Asp Val Gln Gln Glu Ser Ser Glu Gln Lys Asn Lys Ser Thr Asp
305   310   315   320

Lys Gly Glu Lys Lys Pro Asp Ser Asn Glu Lys Gly Glu Arg Lys Lys
            325   330   335

Glu Lys Lys Glu Lys Thr Glu Lys Lys Phe Asp His Ser Lys Lys Ser
            340   345   350

Glu Asp Thr Gln Lys Val Lys Asp Glu Lys Gln Ala Lys Glu Lys Glu
            355   360   365

Val Glu Ser Leu Lys Leu Pro Ser Glu Lys Asn Ser Asn Lys Ala Lys
    370   375   380

Thr Val Glu Gly Thr Lys Glu Asp Phe Ser Leu Ile Asp Ser Asp Val
385   390   395   400

Asp Gly Leu Thr Asp Ile Thr Val Ser Ser Val His Thr Ser Asp Leu
            405   410   415

Ser Ser Phe Glu Glu Asp Thr Glu Glu Glu Val Val Thr Ser Asp Ser
            420   425   430

Met Glu Glu Gly Glu Ile Thr Ser Asp Asp Glu Glu Lys Asn Lys Gln
            435   440   445

Asn Lys Thr Lys Thr Gln Thr Ser Asp Ser Ser Glu Gly Lys Thr Lys
    450   455   460

Ser Val Arg His Ala Tyr Val His Lys Pro Tyr Leu Tyr Ser Lys Tyr
465   470   475   480

1442

Tyr Ser Asp Ser Asp Asp Glu Leu Thr Val Glu Gln Arg Arg Gln Ser
                485   490   495

Ile Gly Ile Leu Trp Phe
                500

<210>   3009
<211>   61
<212>   PRT
<213>   Homo sapiens

<400>   3009

Met Lys Arg Phe Leu Phe Leu Leu Leu Thr Ile Ser Leu Leu Val Met
1   5   10   15

Val Gln Ile Gln Thr Gly Leu Ser Gly Gln Asn Asp Thr Ser Gln Thr
                20   25   30

Ser Ser Pro Ser Ala Ser Ser Ser Met Ser Gly Gly Ile Phe Leu Phe
                35   40   45

Phe Val Ala Asn Ala Ile Ile His Leu Phe Cys Phe Ser
        50   55   60

<210>   3010
<211>   352
<212>   PRT
<213>   Homo sapiens

<400>   3010

Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
1   5   10   15

Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
                20   25   30

Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr Ser Ile Ile
        35   40   45

Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
        50   55   60

Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
65   70   75   80

Ser Val Ala Asp Leu Leu Phe Val Ile Thr Leu Pro Phe Trp Ala Val
                85   90   95

1443

```
Asp Ala Val Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
            100                 105                 110

His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
            115                 120                 125

Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
            130                 135                 140

Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
145                 150                 155                 160

Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn
                165                 170                 175

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
            180                 185                 190

Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
            195                 200                 205

Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys Ile Ile Ile Ser
            210                 215                 220

Lys Leu Ser His Ser Lys Gly His Gln Lys Arg Lys Ala Leu Lys Thr
225                 230                 235                 240

Thr Val Ile Leu Ile Leu Ala Phe Phe Ala Cys Trp Leu Pro Tyr Tyr
                245                 250                 255

Ile Gly Ile Ser Ile Asp Ser Phe Ile Leu Leu Glu Ile Ile Lys Gln
                260                 265                 270

Gly Cys Glu Phe Glu Asn Thr Val His Lys Trp Ile Ser Ile Thr Glu
            275                 280                 285

Ala Leu Ala Phe Phe His Cys Cys Leu Asn Pro Ile Leu Tyr Ala Phe
            290                 295                 300

Leu Gly Ala Lys Phe Lys Thr Ser Ala Gln His Ala Leu Thr Ser Val
305                 310                 315                 320

Ser Arg Gly Ser Ser Leu Lys Ile Leu Ser Lys Gly Lys Arg Gly Gly
                325                 330                 335
```

1444

His Ser Ser Val Ser Thr Glu Ser Glu Ser Ser Ser Phe His Ser Ser
            340   345   350

<210> 3011
<211> 94
<212> PRT
<213> Homo sapiens

<400> 3011

Met Ala Pro Leu Lys Met Leu Ala Leu Val Thr Leu Leu Leu Gly Ala
1   5   10   15

Ser Leu Gln His Ile His Ala Ala Arg Gly Thr Asn Val Gly Arg Glu
            20   25   ,   30

Cys Cys Leu Glu Tyr Phe Lys Gly Ala Ile Pro Leu Arg Lys Leu Lys
            35   40   45

Thr Trp Tyr Gln Thr Ser Glu Asp Cys Ser Arg Asp Ala Ile Val Phe
        50   55   60

Val Thr Val Gln Gly Arg Ala Ile Cys Ser Asp Pro Asn Asn Lys Arg
65   70   75   80

Val Lys Asn Ala Val Lys Tyr Leu Gln Ser Leu Glu Arg Ser
            85   90

<210> 3012
<211> 748
<212> PRT
<213> Homo sapiens

<400> 3012

Met Ser Gln Trp Asn Gln Val Gln Gln Leu Glu Ile Lys Phe Leu Glu
1   5   10   15

Gln Val Asp Gln Phe Tyr Asp Asp Asn Phe Pro Met Glu Ile Arg His
            20   25   30

Leu Leu Ala Gln Trp Ile Glu Asn Gln Asp Trp Glu Ala Ala Ser Asn
        35   40   45

Asn Glu Thr Met Ala Thr Ile Leu Leu Gln Asn Leu Leu Ile Gln Leu
    50   55   60

Asp Glu Gln Leu Gly Arg Val Ser Lys Glu Lys Asn Leu Leu Leu Ile
65   70   75   80

1445

His Asn Leu Lys Arg Ile Arg Lys Val Leu Gln Gly Lys Phe His Gly
                85   90   95

Asn Pro Met His Val Ala Val Val Ile Ser Asn Cys Leu Arg Glu Glu
            100   105   110

Arg Arg Ile Leu Ala Ala Ala Asn Met Pro Val Gln Gly Pro Leu Glu
            115   120   125

Lys Ser Leu Gln Ser Ser Ser Val Ser Glu Arg Gln Arg Asn Val Glu
        130   135   140

His Lys Val Ala Ala Ile Lys Asn Ser Val Gln Met Thr Glu Gln Asp
145   150   155   160

Thr Lys Tyr Leu Glu Asp Leu Gln Asp Glu Phe Asp Tyr Arg Tyr Lys
            165   170   175

Thr Ile Gln Thr Met Asp Gln Ser Asp Lys Asn Ser Ala Met Val Asn
            180   185   190

Gln Glu Val Leu Thr Leu Gln Glu Met Leu Asn Ser Leu Asp Phe Lys
        195   200   205

Arg Lys Glu Ala Leu Ser Lys Met Thr Gln Ile Ile His Glu Thr Asp
    210   215   220

Leu Leu Met Asn Thr Met Leu Ile Glu Glu Leu Gln Asp Trp Lys Arg
225   230   235   240

Arg Gln Gln Ile Ala Cys Ile Gly Gly Pro Leu His Asn Gly Leu Asp
            245   250   255

Gln Leu Gln Asn Cys Phe Thr Leu Leu Ala Glu Ser Leu Phe Gln Leu
            260   265   270

Arg Arg Gln Leu Glu Lys Leu Glu Glu Gln Ser Thr Lys Met Thr Tyr
        275   280   285

Glu Gly Asp Pro Ile Pro Met Gln Arg Thr His Met Leu Glu Arg Val
    290   295   300

Thr Phe Leu Ile Tyr Asn Leu Phe Lys Asn Ser Phe Val Val Glu Arg
305   310   315   320

```
Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro Leu Val Leu Lys Thr
                325             330             335


Leu Ile Gln Phe Thr Val Lys Leu Arg Leu Leu Ile Lys Leu Pro Glu
                340             345             350


Leu Asn Tyr Gln Val Lys Val Lys Ala Ser Ile Asp Lys Asn Val Ser
                355             360             365


Thr Leu Ser Asn Arg Arg Phe Val Leu Cys Gly Thr Asn Val Lys Ala
        370             375             380


Met Ser Ile Glu Glu Ser Ser Asn Gly Ser Leu Ser Val Glu Phe Arg
385             390             395             400


His Leu Gln Pro Lys Glu Met Lys Ser Ser Ala Gly Gly Lys Gly Asn
                405             410             415


Glu Gly Cys His Met Val Thr Glu Glu Leu His Ser Ile Thr Phe Glu
                420             425             430


Thr Gln Ile Cys Leu Tyr Gly Leu Thr Ile Asp Leu Glu Thr Ser Ser
                435             440             445


Leu Pro Val Val Met Ile Ser Asn Val Ser Gln Leu Pro Asn Ala Trp
        450             455             460


Ala Ser Ile Ile Trp Tyr Asn Val Ser Thr Asn Asp Ser Gln Asn Leu
465             470             475             480


Val Phe Phe Asn Asn Pro Pro Ala Thr Leu Ser Gln Leu Leu Glu
                485             490             495


Val Met Ser Trp Gln Phe Ser Ser Tyr Val Gly Arg Gly Leu Asn Ser
                500             505             510


Asp Gln Leu His Met Leu Ala Glu Lys Leu Thr Val Gln Ser Ser Tyr
        515             520             525


Ser Asp Gly His Leu Thr Trp Ala Lys Phe Cys Lys Glu His Leu Pro
        530             535             540


Gly Lys Ser Phe Thr Phe Trp Thr Trp Leu Glu Ala Ile Leu Asp Leu
545             550             555             560


Ile Lys Lys His Ile Leu Pro Leu Trp Ile Asp Gly Tyr Val Met Gly
```

1447

```
                565                        570                        575
```

Phe Val Ser Lys Glu Lys Glu Arg Leu Leu Leu Lys Asp Lys Met Pro
        580   585   590

Gly Thr Phe Leu Leu Arg Phe Ser Glu Ser His Leu Gly Gly Ile Thr
        595   600   605

Phe Thr Trp Val Asp His Ser Glu Ser Gly Glu Val Arg Phe His Ser
    610   615   620

Val Glu Pro Tyr Asn Lys Gly Arg Leu Ser Ala Leu Pro Phe Ala Asp
625   630   635   640

Ile Leu Arg Asp Tyr Lys Val Ile Met Ala Glu Asn Ile Pro Glu Asn
                645   650   655

Pro Leu Lys Tyr Leu Tyr Pro Asp Ile Pro Lys Asp Lys Ala Phe Gly
            660   665   670

Lys His Tyr Ser Ser Gln Pro Cys Glu Val Ser Arg Pro Thr Glu Arg
            675   680   685

Gly Asp Lys Gly Tyr Val Pro Ser Val Phe Ile Pro Ile Ser Thr Ile
        690   695   700

Arg Ser Asp Ser Thr Glu Pro His Ser Pro Ser Asp Leu Leu Pro Met
705   710   715   720

Ser Pro Ser Val Tyr Ala Val Leu Arg Glu Asn Leu Ser Pro Thr Thr
                725   730   735

Ile Glu Thr Ala Met Lys Ser Pro Tyr Ser Ala Glu
            740   745

```
<210>   3013
<211>   92
<212>   PRT
<213>   Homo sapiens

<400>   3013
```

Met Lys Leu Cys Val Thr Val Leu Ser Leu Leu Met Leu Val Ala Ala
1   5   10   15

Phe Cys Ser Pro Ala Leu Ser Ala Pro Met Gly Ser Asp Pro Pro Thr
            20   25   30

```
Ala Cys Cys Phe Ser Tyr Thr Ala Arg Lys Leu Pro Arg Asn Phe Val
        35              40                  45

Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val Val
    50              55                  60

Phe Gln Thr Lys Arg Ser Lys Gln Val Cys Ala Asp Pro Ser Glu Ser
65              70                  75                  80

Trp Val Gln Glu Tyr Val Tyr Asp Leu Glu Leu Asn
                85                  90
```

```
<210>   3014
<211>   444
<212>   PRT
<213>   Homo sapiens

<400>   3014

Met Val Ser Gln Ala Leu Arg Leu Leu Cys Leu Leu Leu Gly Leu Gln
1               5               10                  15

Gly Cys Leu Ala Ala Val Phe Val Thr Gln Glu Glu Ala His Gly Val
            20                  25                  30

Leu His Arg Arg Arg Arg Ala Asn Ala Phe Leu Glu Glu Leu Arg Pro
        35              40                  45

Gly Ser Leu Glu Arg Glu Cys Lys Glu Glu Gln Cys Ser Phe Glu Glu
    50              55                  60

Ala Arg Glu Ile Phe Lys Asp Ala Glu Arg Thr Lys Leu Phe Trp Ile
65              70                  75                  80

Ser Tyr Ser Asp Gly Asp Gln Cys Ala Ser Ser Pro Cys Gln Asn Gly
                85                  90                  95

Gly Ser Cys Lys Asp Gln Leu Gln Ser Tyr Ile Cys Phe Cys Leu Pro
            100             105                 110

Ala Phe Glu Gly Arg Asn Cys Glu Thr His Lys Asp Asp Gln Leu Ile
        115             120                 125

Cys Val Asn Glu Asn Gly Gly Cys Glu Gln Tyr Cys Ser Asp His Thr
    130             135                 140

Gly Thr Lys Arg Ser Cys Arg Cys His Glu Gly Tyr Ser Leu Leu Ala
```

145   150   155   160

Asp Gly Val Ser Cys Thr Pro Thr Val Glu Tyr Pro Cys Gly Lys Ile
                165   170   175

Pro Ile Leu Glu Lys Arg Asn Ala Ser Lys Pro Gln Gly Arg Ile Val
                180   185   190

Gly Gly Lys Val Cys Pro Lys Gly Glu Cys Pro Trp Gln Val Leu Leu
                195   200   205

Leu Val Asn Gly Ala Gln Leu Cys Gly Gly Thr Leu Ile Asn Thr Ile
    210   215   220

Trp Val Val Ser Ala Ala His Cys Phe Asp Lys Ile Lys Asn Trp Arg
225   230   235   240

Asn Leu Ile Ala Val Leu Gly Glu His Asp Leu Ser Glu His Asp Gly
                245   250   255

Asp Glu Gln Ser Arg Arg Val Ala Gln Val Ile Ile Pro Ser Thr Tyr
                260   265   270

Val Pro Gly Thr Thr Asn His Asp Ile Ala Leu Leu Arg Leu His Gln
    275   280   285

Pro Val Val Leu Thr Asp His Val Val Pro Leu Cys Leu Pro Glu Arg
    290   295   300

Thr Phe Ser Glu Arg Thr Leu Ala Phe Val Arg Phe Ser Leu Val Ser
305   310   315   320

Gly Trp Gly Gln Leu Leu Asp Arg Gly Ala Thr Ala Leu Glu Leu Met
                325   330   335

Val Leu Asn Val Pro Arg Leu Met Thr Gln Asp Cys Leu Gln Gln Ser
                340   345   350

Arg Lys Val Gly Asp Ser Pro Asn Ile Thr Glu Tyr Met Phe Cys Ala
                355   360   365

Gly Tyr Ser Asp Gly Ser Lys Asp Ser Cys Lys Gly Asp Ser Gly Gly
    370   375   380

Pro His Ala Thr His Tyr Arg Gly Thr Trp Tyr Leu Thr Gly Ile Val
385   390   395   400

1450

```
Ser Trp Gly Gln Gly Cys Ala Thr Val Gly His Phe Gly Val Tyr Thr
              405                 410             415

Arg Val Ser Gln Tyr Ile Glu Trp Leu Gln Lys Leu Met Arg Ser Glu
              420                 425             430

Pro Arg Pro Gly Val Leu Leu Arg Ala Pro Phe Pro
              435                 440
```

```
<210>  3015
<211>  769
<212>  PRT
<213>  Homo sapiens

<400>  3015
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```
Met Leu Gly Leu Arg Pro Pro Leu Leu Ala Leu Val Gly Leu Leu Ser
1               5                 10              15

Leu Gly Cys Val Leu Ser Gln Glu Cys Thr Lys Phe Lys Val Ser Ser
              20                25              30

Cys Arg Glu Cys Ile Glu Ser Gly Pro Gly Cys Thr Trp Cys Gln Lys
              35                40              45

Leu Asn Phe Thr Gly Pro Gly Asp Pro Asp Ser Ile Arg Cys Asp Thr
    50                55                60

Arg Pro Gln Leu Leu Met Arg Gly Cys Ala Ala Asp Asp Ile Met Asp
65              70                75                80

Pro Thr Ser Leu Ala Glu Thr Gln Glu Asp His Asn Gly Gly Gln Lys
              85                90                95

Gln Leu Ser Pro Gln Lys Val Thr Leu Tyr Leu Arg Pro Gly Gln Ala
              100               105             110

Ala Ala Phe Asn Val Thr Phe Arg Arg Ala Lys Gly Tyr Pro Ile Asp
              115               120             125

Leu Tyr Tyr Leu Met Asp Leu Ser Tyr Ser Met Leu Asp Asp Leu Arg
    130               135             140

Asn Val Lys Lys Leu Gly Gly Asp Leu Leu Arg Ala Leu Asn Glu Ile
145               150               155               160
```

Thr Glu Ser Gly Arg Ile Gly Phe Gly Ser Phe Val Asp Lys Thr Val
                165   170   175

Leu Pro Phe Val Asn Thr His Pro Asp Lys Leu Arg Asn Pro Cys Pro
            180   185   190

Asn Lys Glu Lys Glu Cys Gln Pro Pro Phe Ala Phe Arg His Val Leu
            195   200   205

Lys Leu Thr Asn Asn Ser Asn Gln Phe Gln Thr Glu Val Gly Lys Gln
210   215   220

Leu Ile Ser Gly Asn Leu Asp Ala Pro Glu Gly Gly Leu Asp Ala Met
225   230   235   240

Met Gln Val Ala Ala Cys Pro Glu Glu Ile Gly Trp Arg Asn Val Thr
                245   250   255

Arg Leu Leu Val Phe Ala Thr Asp Asp Gly Phe His Phe Ala Gly Asp
            260   265   270

Gly Lys Leu Gly Ala Ile Leu Thr Pro Asn Asp Gly Arg Cys His Leu
            275   280   285

Glu Asp Asn Leu Tyr Lys Arg Ser Asn Glu Phe Asp Tyr Pro Ser Val
    290   295   300

Gly Gln Leu Ala His Lys Leu Ala Glu Asn Asn Ile Gln Pro Ile Phe
305   310   315   320

Ala Val Thr Ser Arg Met Val Lys Thr Tyr Glu Lys Leu Thr Glu Ile
                325   330   335

Ile Pro Lys Ser Ala Val Gly Glu Leu Ser Glu Asp Ser Ser Asn Val
            340   345   350

Val His Leu Ile Lys Asn Ala Tyr Asn Lys Leu Ser Ser Arg Val Phe
            355   360   365

Leu Asp His Asn Ala Leu Pro Asp Thr Leu Lys Val Thr Tyr Asp Ser
    370   375   380

Phe Cys Ser Asn Gly Val Thr His Arg Asn Gln Pro Arg Gly Asp Cys
385   390   395   400

Asp Gly Val Gln Ile Asn Val Pro Ile Thr Phe Gln Val Lys Val Thr

                              405   410   415

    Ala Thr Glu Cys Ile Gln Glu Gln Ser Phe Val Ile Arg Ala Leu Gly
                  420   425   430

    Phe Thr Asp Ile Val Thr Val Gln Val Leu Pro Gln Cys Glu Cys Arg
                  435   440   445

    Cys Arg Asp Gln Ser Arg Asp Arg Ser Leu Cys His Gly Lys Gly Phe
          450   455   460

    Leu Glu Cys Gly Ile Cys Arg Cys Asp Thr Gly Tyr Ile Gly Lys Asn
    465   470   475   480

    Cys Glu Cys Gln Thr Gln Gly Arg Ser Ser Gln Glu Leu Glu Gly Ser
                      485   490   495

    Cys Arg Lys Asp Asn Asn Ser Ile Ile Cys Ser Gly Leu Gly Asp Cys
                  500   505   510

    Val Cys Gly Gln Cys Leu Cys His Thr Ser Asp Val Pro Gly Lys Leu
              515   520   525

    Ile Tyr Gly Gln Tyr Cys Glu Cys Asp Thr Ile Asn Cys Glu Arg Tyr
    530   535   540

    Asn Gly Gln Val Cys Gly Gly Pro Gly Arg Gly Leu Cys Phe Cys Gly
    545   550   555   560

    Lys Cys Arg Cys His Pro Gly Phe Glu Gly Ser Ala Cys Gln Cys Glu
                  565   570   575

    Arg Thr Thr Glu Gly Cys Leu Asn Pro Arg Arg Val Glu Cys Ser Gly
              580   585   · 590

    Arg Gly Arg Cys Arg Cys Asn Val Cys Glu Cys His Ser Gly Tyr Gln
              595   600   605

    Leu Pro Leu Cys Gln Glu Cys Pro Gly Cys Pro Ser Pro Cys Gly Lys
          610   615   620

    Tyr Ile Ser Cys Ala Glu Cys Leu Lys Phe Glu Lys Gly Pro Phe Gly
    625   630   635   640

    Lys Asn Cys Ser Ala Ala Cys Pro Gly Leu Gln Leu Ser Asn Asn Pro
                  645   650   655

```
    Val Lys Gly Arg Thr Cys Lys Glu Arg Asp Ser Glu Gly Cys Trp Val
                660                 665                 670

    Ala Tyr Thr Leu Glu Gln Gln Asp Gly Met Asp Arg Tyr Leu Ile Tyr
                675                 680                 685

    Val Asp Glu Ser Arg Glu Cys Val Ala Gly Pro Asn Ile Ala Ala Ile
                690                 695                 700

    Val Gly Gly Thr Val Ala Gly Ile Val Leu Ile Gly Ile Leu Leu Leu
    705                 710                 715                 720

    Val Ile Trp Lys Ala Leu Ile His Leu Ser Asp Leu Arg Glu Tyr Arg
                725                 730                 735

    Arg Phe Glu Lys Glu Lys Leu Lys Ser Gln Trp Asn Asn Asp Asn Pro
                740                 745                 750

    Leu Phe Lys Ser Ala Thr Thr Thr Val Met Asn Pro Lys Phe Ala Glu
                755                 760                 765

    Ser
```

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<210>   3016
<211>   50
<212>   DNA
<213>   Homo sapiens

<400>   3016
gggaggaaca ctgcactctt aagcttccgc cgtctcaacc cctcacagga                    50


<210>   3017
<211>   50
<212>   DNA
<213>   Homo sapiens

<400>   3017
aggagtcttt tacccggtgt gctttgccgc agtcatccaa aataaattca                    50


<210>   3018
<211>   50
<212>   DNA
<213>   Homo sapiens

<400>   3018
cacctgattc cccctcttgc ccacaggact ctgctgttgt tttcattctg                    50
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<210>  3019
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3019
attatatttg tccctatcag aatcctcgaa tccctagcag ccagtccctg        50


<210>  3020
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3020
gtcccttagg ggagggagag ttgtcctctt tgcccacagt ctaccctcag        50


<210>  3021
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3021
cttgggccag actgtcaggg ttcaaggagg gcatcaggag cagacggaga        50


<210>  3022
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3022
ctcttcaagg ggtctacatg gcaactgtga ggaggggaga ttcagtgtgg        50


<210>  3023
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3023
taagcataaa acctgacacg ttaaaatccc tgccctttgg tgagcccact        50


<210>  3024
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3024
tgctggtatt ctcactgcca catttttgga aacctgtatt acaccttaaa        50


<210>  3025
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3025
cagtcactgg gtctatatta aacagcaacc agagcaacaa atggcaaaca        50
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<210> 3026
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3026
tctagcccag cattgatcta gaagcagagg aatcccagcg cctttaaaa   50

<210> 3027
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3027
tgggcaagac atgattaatg aatcagaatc ctgtttcatt ggtgacttgg   50

<210> 3028
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3028
tgcagattcc tagtagcatg ccttacctac agcactatgt gcatttgctg   50

<210> 3029
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3029
ggtctgagag tctgtgaaga tggcccagtc ttctatcccc cacctaaaaa   50

<210> 3030
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3030
cttgaccaaa cccacagcct gtctcttctc ttgtttagtt acttacggca   50

<210> 3031
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3031
ccactgtcac tgtttctctg ctgttgcaaa tacatggata acacatttga   50

<210> 3032
<211> 50
<212> DNA
<213> Homo sapiens

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<400>  3032
tgcagccact attgttagtc tcttgattca taatgactta agcacacttg          50


<210>  3033
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3033
cctgatggag agaagaaggc atatgttcga ctggctcctg attacgatgc          50


<210>  3034
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3034
gccgaattgt ctttggtgct tttcacttgt gttttaaaat aaggattttt          50


<210>  3035
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3035
ctggaggacc tgttgatgct agttcagagt atcaccaaga gctggagagg          50


<210>  3036
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3036
accatccaat cggacaagct ttcagaacct tattgaagga tttgaagcac          50


<210>  3037
<211>  50
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<210>  3038
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<212>  DNA
<213>  Homo sapiens

<400>  3038
agcggactca ggctccagct gtggctacaa catagggttt ttatacaaga          50


<210>  3039
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<212>  DNA
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<213> Homo sapiens

<400> 3039
accagactga caaatgtgta tcggatgctt ttgttcaggg ctgtgatcgg   50

<210> 3040
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<212> DNA
<213> Homo sapiens

<400> 3040
ccactgtcac tgtttctctg ctgttgcaaa tacatggata acacatttga   50

<210> 3041
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3041
aagtgaacaa aataagcaac taaatgagac ctaataattg gccttcgatt   50

<210> 3042
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3042
tctgttgata gctggagaac tttagtttca agtactacat tgtgaaagca   50

<210> 3043
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<212> DNA
<213> Homo sapiens

<400> 3043
gacctcatct ccaagatgga gaagatctga cctccacgga gccgctgtcc   50

<210> 3044
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<212> DNA
<213> Homo sapiens

<400> 3044
ctgaccgcca ctctcacatt tgggctcttc gctggccttg gtggagctgg   50

<210> 3045
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<212> DNA
<213> Homo sapiens

<400> 3045
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<210> 3046

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<212>    DNA
<213>    Homo sapiens

<400>    3046
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<210>    3047
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<212>    DNA
<213>    Homo sapiens

<400>    3047
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<210>    3048
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<212>    DNA
<213>    Homo sapiens

<400>    3048
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<210>    3049
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<212>    DNA
<213>    Homo sapiens

<400>    3049
ccttccagaa gctacgaaaa agggagctgt ttaaatttaa taaatctctg          50


<210>    3050
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<212>    DNA
<213>    Homo sapiens

<400>    3050
ccaatggata tttctgtatt actagggagg catttacagt cctctaatgt          50


<210>    3051
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<212>    DNA
<213>    Homo sapiens

<400>    3051
atctgacatt attgtaacta ccgtgtgatc agtaagattc ctgtaagaaa          50


<210>    3052
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<212>    DNA
<213>    Homo sapiens

<400>    3052
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<400>   3054
gggcattcca ccgaaattct tggggaaatt tagtagcctt cattttagca          50


<210>   3055
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<400>   3055
aaagggtttt atccactgtc atttcaattg gataacattt tgtcaagttt          50


<210>   3056
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<400>   3057
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<210>   3058
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<212>   DNA
<213>   Homo sapiens

<400>   3058
gtgggtaagg ggctcaagct gtgatgctgc tggttttatc tctagtgaaa          50


<210>   3059
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<213>   Homo sapiens

<400>   3059
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<210> 3060
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<212> DNA
<213> Homo sapiens

<400> 3060
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<210> 3061
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<212> DNA
<213> Homo sapiens

<400> 3061
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<210> 3062
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3062
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<210> 3063
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3063
tgatctgact ggaaaacaat cctgtatccc ctcccaaaga atcatgggct   50

<210> 3064
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<212> DNA
<213> Homo sapiens

<400> 3064
aacaagccat gtttgcccta gtccaggatt gcctcacttg agacttgcta   50

<210> 3065
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<212> DNA
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<400> 3065
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<210> 3066
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<212> DNA
<213> Homo sapiens

<400> 3066
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<212> DNA
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<210> 3068
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<212> DNA
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<400> 3068
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<210> 3069
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<212> DNA
<213> Homo sapiens

<400> 3069
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<210> 3070
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<212> DNA
<213> Homo sapiens

<400> 3070
aggtgggctg gacttctacc tgccctcaag ggtgtgtata ttgtataggg   50

<210> 3071
<211> 50
<212> DNA
<213> Homo sapiens

<400> 3071
cagacgctcc agtgctgccg aggttagtgt gtttattaga cctgaaatga   50

<210> 3072
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<212> DNA
<213> Homo sapiens

<400> 3072
ccttgggctg agtttgctgg tcctgaagat tacagttttg gttagagaga   50

<210> 3073
<211> 50

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<213>  Homo sapiens

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<210>  3074
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<212>  DNA
<213>  Homo sapiens

<400>  3074
tgtgctaagc ctgatgaaat gtgctccttc aatctccatg aaaccatcgt                50


<210>  3075
<211>  50
<212>  DNA
<213>  Homo sapiens

<400>  3075
ttcctgtctc catgttgtgg tcaagattgc catttgcttc ctgagtttca                50


<210>  3076
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<212>  DNA
<213>  Homo sapiens

<400>  3076
ataacagact ccagctcctg gtccacccgg catgtcagtc agcactctgg                50


<210>  3077
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<212>  DNA
<213>  Homo sapiens

<400>  3077
gggagccatc cctctctacc aaggtggcaa tgatggaggg aacttgcatg                50


<210>  3078
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<212>  DNA
<213>  Homo sapiens

<400>  3078
ttgacctccc attttactacta tttgccaata cctttttcta ggaatgtgct                50


<210>  3079
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<212>  DNA
<213>  Homo sapiens

<400>  3079
ggaggcagcc agggcttacc tgtacactga cttgagacca gttgaataaa                50
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<210>  3080
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<212>  DNA
<213>  Homo sapiens

<400>  3080
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<210>  3081
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<212>  DNA
<213>  Homo sapiens

<400>  3081
tttgcatccc gagttttgta ttccaagaaa atcaaagggg gccaatttgt            50


<210>  3082
<211>  63
<212>  DNA
<213>  Homo sapiens

<400>  3082
ggccagtgaa ttgtaatacg actcactata gggaggcggt ttttttttttt tttttttttt    60

ttt                                                               63


<210>  3083
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<212>  DNA
<213>  Homo sapiens

<400>  3083
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gcatccccca aagttcacaa tgtggccgag gactttgatt gcacattgtt gttttttaat    120

agtcattcca aatatgagat gcattgttac aggaagtccc ttgccatcct aaaagcaccc    180

cacttctctc taaggagaat ggcccagtcc tctcccaagt ccacacaggg gagggatagc    240

attgctttcg tgtaaattat gtaatgcaaa attttttaa tcttcgcctt aatctttttt    300

attttgtttt attttgaatg atgagccttc gtgcccccc ttcccccttt tttcccccaa    360

cttgagatgt atgaaggctt ttggtctccc tgggagtggg tggaggcagc cgggcttacc    420

tgtacactga cttgagacca gttgaataaa agtgcacacc tta                   463


<210>  3084
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<212>  DNA
<213>  Homo sapiens

<400>  3084
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aaatatgtgg ttggagagct catttggaat tttgccgatt tcatgactga acagtcaccg    120
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acgagagtgc tggggaataa aaaggggatc ttcactcggc agagacaacc aaaaagtgca        180

gcgttccttt tgcgagagag atactggaag attgccaatg aaaccaggta tccccactca        240

gtagccaagt cacaatgttt ggaaaacagc ccgtttactt gagcaagact gataccacct        300

gcgtgtccct tcctccccga gtcagggcga cttccacagc agcagaacaa gtgcctcctg        360

gactgttcac ggcagaccag aacgtttctg gcctgggttt tgtggtcatc tattctagca        420

gggaacacta aaggtggaaa taaaagattt tctattatgg aaataaagag ttggcatgaa        480

agtcgctact g                                                              491
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<213>  Homo sapiens

<400>  3085
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<210>  3086
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<213>  Homo sapiens

<400>  3086
tgtggccgag gactttgatt                                                      20


<210>  3087
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<212>  DNA
<213>  Homo sapiens

<400>  3087
tggctttttag gatggcaagg                                                     20


<210>  3088
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<213>  Homo sapiens

<400>  3088
ggggggcttag tttgcttcct                                                     20


<210>  3089
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<400>  3089
aagtgcagcg ttccttttgc                                                      20
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<212>  DNA
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<400>  3090
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<210>  3091
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<400>  3091
cgggctgttt tccaaacatt                                       20


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<400>  3092
gaagggacac gcaggtggta                                       20


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<400>  3093
taccacctgc gtgtcccttc                                       20


<210>  3094
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<400>  3094
gaggcacttg ttctgctgct g                                     21


<210>  3095
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<400>  3095
tgtggccgag gactttgatt                                       20


<210>  3096
<211>  327
<212>  DNA
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<400>  3096
ggggactctg gaggccctct tgtgtgtaac aaggtggccc agggcattgt ctcctatgga   60
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cgaaacaatg gcatgcctcc acgagcctgc accaaagtct caagctttgt acactggata        120

aagaaaacca tgaaacgcta ctaactacag gaagcaaact aagcccccgc tgtaatgaaa        180

caccttctct ggagccaagt ccagatttac actgggagag gtgccagcaa ctgaataaat        240

acctctccca gtgtaaatct ggagccaagt ccagatttac actgggagag gtgccagcaa        300

ctgaataaat acctcttagc tgagtgg                                            327
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<210>   3097
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<212>   DNA
<213>   Homo sapiens

<400>   3097
acgagcctgc accaaagtct                                                      20
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<210>   3098
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<212>   DNA
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<400>   3098
aaacaatggc atgcctccac                                                      20
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<210>   3099
<211>   20
<212>   DNA
<213>   Homo sapiens

<400>   3099
tcattacagc gggggcttag                                                      20
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<210>   3100
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<213>   Homo sapiens

<400>   3100
gggggcttag tttgcttcct                                                      20
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<212>   DNA
<213>   Homo sapiens

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acttgcaaga ccattatcaa ctcctaatcc cagctcagaa agggagcctc tgcgactcat        120

tcatcgccct ccaggactga ctgcattgca cagatgatgg atatttacgt atgtttgaaa        180

cgaccatcct ggatggtgga caataaaaga atgaggactg cttcaaattt ccagtggctg        240
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ttatcaacat ttattcttct atatctaatg aatcaagtaa atagccagaa aaaggggggct      300

cctcatgatt tgaagtgtgt aactaacaat ttgcaagtgt ggaactgttc ttggaaagca      360

ccctctggaa caggccgtgg tactgattat gaagtttgca ttgaaaacag gtcccgttct      420

tgttatcagt tggagaaaac cagtattaaa attccagctc tttcacatgg tgattatgaa      480

ataacaataa attctctaca tgattttgga agttctacaa gtaaattcac actaaatgaa      540

caaaacgttt ccttaattcc agatactcca gagatcttga atttgtctgc tgatttctca      600

acctctacat tatacctaaa gtggaacgac aggggttcag tttttccaca ccgctcaaat      660

gttatctggg aaattaaagt tctacgtaaa gagagtatgg agctcgtaaa attagtgacc      720

cacaacacaa ctctgaatgg caaagataca cttcatcact ggagttgggc ctcagatatg      780

cccttggaat gtgccattca ttttgtggaa attagatgct acattgacaa tcttcatttt      840

tctggtctcg aagagtggag tgactggagc cctgtgaaga acatttcttg gatacctgat      900

tctcagacta aggttttttcc tcaagataaa gtgatacttg taggctcaga cataacattt      960

tgttgtgtga gtcaagaaaa agtgttatca gcactgattg gccatacaaa ctgcccccttg     1020

atccatcttg atggggaaaa tgttgcaatc aagattcgta atatttctgt ttctgcaagt     1080

agtggaacaa atgtagtttt tacaaccgaa gataacatat ttggaaccgt tatttttgct     1140

ggatatccac cagatactcc tcaacaactg aattgtgaga cacatgattt aaaagaaatt     1200

atatgtagtt ggaatccagg aagggtgaca gcgttggtgg gcccacgtgc tacaagctac     1260

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aacgaaagct atcaattatt atttcaaatg cttccaaatc aagaaatata taattttact     1380

ttgaatgctc acaatccgct gggtcgatca caatcaacaa ttttagttaa tataactgaa     1440

aaagtttatc cccatactcc tacttcattc aaagtgaagg atattaattc aacagctgtt     1500

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aaaaatttaa taatctattg gaagcccttta cccattaatg aagctaatgg aaaaatactt     1860

tcctacaatg tatcgtgttc atcagatgag gaaacacagt cccttttctga aatccctgat     1920

cctcagcaca agcagagat acgacttgat aagaatgact acatcatcag cgtagtggct     1980

aaaaattctg tgggctcatc accaccttcc aaaatagcga gtatggaaat tccaaatgat     2040
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gatctcaaaa tagaacaagt tgttgggatg ggaaggggga ttctcctcac ctggcattac     2100

gaccccaaca tgacttgcga ctacgtcatt aagtggtgta actcgtctcg gtcggaacca     2160

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gagtttcgac caggtataag atataatttt ttcctgtatg gatgcagaaa tcaaggatat     2280

caattattac gctccatgat tggatatata gaagaattgg ctcccattgt tgcaccaaat     2340

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tgttctgttg tttgtggttt tctcatatgt atacttggtg gaattgtaag tggatttgca     3840

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ctagatgaaa accaagcaca gattttaaaa cttctaagat tattctcctc tatccacagc    3960

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gaagctcata ttgtatcttt ttaaaaacca tgttgtggaa aaaagccaga gtgacaagtg    5040

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aatttctgag ctttatgatc tgtggaaatt tggaatgaaa tcgaattcat tttgtacata    5160

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cgaccatcct ggatggtgga caataaaaga atgaggactg cttcaaattt ccagtggctg      240

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cctcatgatt tgaagtgtgt aactaacaat ttgcaagtgt ggaactgttc ttggaaagca      360

ccctctggaa caggccgtgg tactgattat gaagtttgca ttgaaaacag gtcccgttct      420

tgttatcagt tggagaaaac cagtattaaa attccagctc tttcacatgg tgattatgaa      480

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caaaacgttt ccttaattcc agatactcca gagatcttga atttgtctgc tgatttctca      600

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gaccccaaca tgacttgcga ctacgtcatt aagtggtgta actcgtctcg gtcggaacca   2160

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acaaaatcta tttaggaact ctgtgtatga atcctgattt taactgctag gattcagcta    5100

aatttctgag ctttatgatc tgtggaaatt tggaatgaaa tcgaattcat tttgtacata    5160

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agagaaggaa tattgggtta caatctgaat ttctctttat gatttctctt aaagtataga     180

acagctatta aaatgactaa tattgctaaa atgaaggcta ctaaatttcc ccaagaattt     240

cggtggaatg cccaaaaatg gtgttaagat atgcagaagg gcccatttca agcaaagcaa     300

tctctccacc ccttcataaa agatttaagc taaaaaaaaa aaaaaagaa gaaaatccaa      360

cagctgaaga cattgggcta tttataaatc ttctcccagt cccccagaca gcctcacatg     420

ggggctgtaa acagctaact aaaatatctt tgagactctt atgtccacac ccactgacac     480

aaggagagct gtaaccacag tgaaactaga ctttgctttc ctttagcaag tatgtgccta     540

tgatagtaaa ctggagtaaa tgtaacagta ataaacaaa ttttttttaa aaataaaaat      600

tataccttt tctccaacaa acggtaaaga ccacgtgaag acatccataa aattaggcaa      660

ccagtaaaga tgtggagaac cagtaaactg tcgaattca tcacattatt ttcatacttt      720

aatacagcag ctttaattat tggagaacat caaagtaatt aggtgccgaa aaacattgtt     780

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<223>   n is a, c, g, t or u

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ngagaaggaa tattgggtta caatctgaat ttctctttat gatttctctt aaagtataga    180

acagctatta aaatgactaa tattgctaaa atgaaggcta ctaaatttcc ccaagaattt    240

cggtggaatg cccaaaaatg gtgttaagat atgcagaagg gcccatttca agcaaagcaa    300

tctctccacc ccttcataaa agatttaagc taaaaaaaaa aaaaaagaa gaaaatccaa     360

cagctgaaga cattgggcta tttataaatc ttctcccagt cccccagaca gcctcacatg    420
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ggggctgtaa acagctaact aaaatatctt tgagactctt atgtccacac ccactgacac       480

aaggagagct gtaaccacag tgaaactaga ctttgctttc ctttagcaag tatgtgccta       540

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nnnncctttt tctccaacaa acggtaaaga ccacgtgaag acatccataa aattaggcaa       660

ccagtaaaga tgtggagaac cagtaaactg tcgaaattca tcacattatt ttcatacttt       720

aatacagcag ctttaattat tggagaacat caaagtaatt aggtgccgaa aaacattgtt       780

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a                                                                      841
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ttt                                                                     63
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atctggacca gtttattaaa tgggatttct gccacaaacc ttggaagaat cacatcatct       300

tannnccaag tgaaaactgt gttgcgtaac aaagaacatg actgcgctcc acacatacat       360

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tccccaagta tcaccttcca atttctggga gcagtgctct ggccggatcc ttgccgcgcg       600

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<213>   Homo sapiens

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tcttcacctt catctcttcc tcgggatgtc tgtcagggtt caccttggca tcaatttgcc  180

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agcaggaata aaacaacaga gagaccgggt ctcttaaact gcccaatata ttggcagcaa  360

ctccgagaga aatgcttgtt attttctcac actgtcaacc cttggaataa cagtctagct  420

gattgttcca ccaaagaatc cagcctgctg cttattcgag ataaggatga attgatacac  480

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gcgcaggcgg ccgtgggggcc cggagggcgc gcccggcccg aggtgcgctc gatggtggac  180

gtgctggcgg accacgcagg cgagctcgtg cgcaccgaca gccccaactt cctctgctcc  240

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ttggggggacg tgccggatgg tacggtggtg actgtgatgg caggcaatga cgagaactac  360
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cttcgcttcg tgggccgcag tgggcgaggg aagagtttca ccctgaccat cactgtgttc     480

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cgggagccca gacggcaccg gcagaagctg gaggaccaga ccaagccgtt ccctgaccgc     600

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1477

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gtctgtaacc tgttttgtgc tctgaaagca aatagtcctg agcaaaaaaa aaaaaaaaaa   2340

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<212> DNA
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tactctggat caagtgtggc ccagaaggtt actcaagccc agtcatcagt atccatgcca   120

gtgaggaaag cagtcaccct gaactgcctg tatgaaacaa gttggtggtc atattatatt   180

ttttggtaca agcaacttcc cagcaaagag atgattttcc ttattcgcca gggttctgat   240

gaacagaatg caaaaagtgg tcgctattct gtcaacttca gaaagcagc gaaatccgtc   300

gccttaacca tttcagcctt acagctagaa gattcagcaa agtactttg tgctcttggg   360

acggggggtga ggggactcca ggacaccgat aaactcatct ttggaaaagg aacccgtgtg   420

actgtggaac caagaagtca gcctcatacc aaaccatccg tttttgtcat gaaaaatgga   480

acaaatgtcg cttgtctggt gaaggaattc taccccaagg atataagaat aaatctcgtg   540

tcatccaaga agataacaga gtttgatcct gctattgtca tctctcccag tgggaagtac   600

aatgctgtca agcttggtaa atatgaagat tcaaattcag tgacatgttc agttcaacac   660

gacaataaaa ctgtgcactc cactgacttt gaagtgaaga cagattctac agatcacgta   720

aaaccaaagg aaactgaaaa cacaaagcaa ccttcaaaga gctgccataa acccaaagcc   780

atagttcata ccgagaaggt gaacatgatg tccctcacag tgcttgggct acgaatgctg   840

tttgcaaaga ctgttgccgt caattttctc ttgactgcca agttattttt cttgtaaggc   900

tgactggcat gaggaagcta cactcctgaa gaaaccaaag gcttacaaaa atgcatctcc   960

ttggcttctg acttctttgt gattcaagtt gacctgtcat agccttgtta aaatggctgc   1020

tagccaaacc actttttctt caaagacaac aaacccagct catcctccag cttgatggga   1080

agacaaaagt cctggggaag gggggtttat gtcctaactg ctttgtatgc tgttttataa   1140

agggatagaa ggatataaaa a   1161

<210> 3111
<211> 611
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (543)..(543)
<223> n is a, c, g, t or u

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tataagttac atattttaag aaaaatcagt cattttttcat atataattgc aaagaattaa   120

gatcatttaa ctttagcact ataagcaagc attaaattaa atgcactcag attttggca   180

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cattatatgg cattccttat accacatatt tataagatct aaaggattat aaacatatta      240

cacataataa ttaagtccaa tataaattgt gttcaggtta taaaatgccc tatttaagtt      300

gtgctcttgg tgagggtgaa cagaaaagaa aaggcttctt ctttagccct taagcctatg      360

acacaatttc catgctggta attcctttca tcttctgaag aatctctatt ttattataac      420

attattggct ttcagcttgg aatttctcta cgcagattgt ctattgacag tgccaaggaa      480

acatctcact gtccacagaa tagcagcctc cacccagttg aaagctgcac attgtttcca      540

ctntaccatt ggtacttccc tctgatggca tccagcacac gaccattagc ctgagtgatg      600

cccaactgag c                                                          611
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<210>   3112
<211>   572
<212>   DNA
<213>   Homo sapiens

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gaggcctagc aagtctcaag tgaggcaatc ctggactagg gcaaacatgg cttgttccaa      120

aagccggggg ttaaggaatc aaagtcaggt gaaactatca ctttcacaaa agcttttctt      180

gactcctggg cctagtatct tttgcccctg gcagaatgta acagcaaaat gtctccttct      240

gaaacggaag gcacagccct ctttcagaag caaaacacct taacactcgg cttctatttg      300

cttaagaatt tacaaataga aatgagaatc aaaggtttta actcatctga tagcactggg      360

cacccaatgt tcacagcctg cttctttgaa ttgttagtgt ctccccaata aataaataca      420

gaaccttgga tacccttcga attttaaaat accttaaagt cttccattaa tcttattttt      480

taaaaatgct aggtttgttt cagttacctg cagcaatcaa aaagctttgg caccttcttt      540

tagagaattg cacaaaacag gatgcatcaa gg                                   572
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<210>   3113
<211>   1026
<212>   DNA
<213>   Homo sapiens

<400>   3113
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tctgggctcc aggcagaagc acagcctccc cgacctgccc tacgactacg gcgccctgga      120

acctcacatc aacgcgcaga tcatgcagct gcaccacagc aagcaccacg cggcctacgt      180

gaacaacctg aacgtcaccg aggagaagta ccaggaggcg ttggccaagg agatgttac      240

agcccagata gctcttcagc ctgcactgaa gttcaatggt ggtggtcata tcaatcatag      300

cattttctgg acaaacctca gccctaacgg tggtggagaa cccaaagggg agttgctgga      360
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agccatcaaa ctggactttg gttcctttga caagtttaag gagaagctga cggctgcatc      420

tgttggtgtc caaggctcag gttggggttg gcttggtttc aataaggaac ggggacactt      480

acaaattgct gcttgtccaa atcaggatcc actgcaagga acaacaggcc ttattccact      540

gctggggatt gatgtgtggg agcacgctta ctaccttcag tataaaaatg tcaggcctga      600

ttatctaaaa gctatttgga atgtaatcaa ctgggagaat gtaactgaaa gatacatggc      660

ttgcaaaaag taaaccacga tcgttatgct gagtatgtta agctctttat gactgttttt      720

gtagtggtat agagtactgc agaatacagt aagctgctct attgtagcat ttcttgatgt      780

tgcttagtca cttatttcat aaacaactta atgttctgaa taatttctta ctaaacattt      840

tgttattggg caagtgattg aaaatagtaa atgctttgtg tgattgaatc tgattggaca      900

ttttcttcag agagctaaat tacaattgtc atttataaaa ccatcaaaaa tattccatcc      960

atatactttg gggacttgta gggatgcctt tctagtccta ttctattgca gttatagaaa     1020

atctag                                                                 1026


<210>   3114
<211>   1271
<212>   DNA
<213>   Homo sapiens

<400>   3114
ctgtattgtg gttcctggaa cactttagag gcttgtgatt ctactgcttc ttattcacac       60

tataatacat gtctcaccaa tagatgattc aagaacatca tttaaataca caatttttca      120

ttctctattt ttgctaaatt tcttcatact caactttcag attctttaat ctccagctca      180

gcttcaacaa ttcaacgctg ttctttctga aaaagtacac atcgtgcctt ctctacttcg      240

ctcttggaac ataatttctc atggcagctt ttactaaact gagtattgag ccagcattta      300

ctccaggacc caacatagaa ctccagaaag actctgactg ctgttcttgc caagaaaaat      360

gggttgggta ccggtgcaac tgttacttca tttccagtga acagaaaact tggaacgaaa      420

gtcggcatct ctgtgcttct cagaaatcca gcctgcttca gcttcaaaac acagatgaac      480

tggattttat gagctccagt caacaatttt actggattgg actctcttac agtgaggagc      540

acaccgcctg gttgtgggag aatggctctg cactctccca gtatctattt ccatcatttg      600

aaacttttaa tacaaagaac tgcatagcgt ataatccaaa tggaaatgct ttagatgaat      660

cctgtgaaga taaaaatcgt tatatctgta agcaacagct catttaaatg tttcttgggg      720

cagagaaggt ggagagtaaa gacccaacat tactaacaat gatacagttg catgttatat      780

tattactaat tgtctacttc tggagtctat aaaatgtttt taaacagtgt catatacaat      840

tgtcatgtat gtgaaacaat gtgtttttaaa attgatgaaa ttcgttcacc tacatttgag      900
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aattataaaa ttaacataaa gaattttgta ttttcattta atgtatataa tgttaaattc      960

aatgtagttt tattacacat ttatgtaatt ttatttacat tcttgctaat tctcagcaga     1020

aatttaaata agatttaatt cacatcaaat aaaatttaga aaataaaatt taactcacac     1080

tgcccaggct ggagcatagt ggcaagatca tagctcattg caagctcaag tgatcctcct     1140

gactcagcct cccaagtagc taggactgca ggcaccatgt cactatgccc gactaatttt     1200

taatttttaa ttttttgtca agacaaggtc ttgctatgtt gcccaggctg gtcttgaact     1260

cctggcctca a                                                          1271
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<210>  3115
<211>  358
<212>  DNA
<213>  Homo sapiens

<400>  3115
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atgaacaagt aaaaacacac acagcaaaat ttacatcaaa attattacgt ggtacagaat     120

ccaaaagtca taaaaagcaa aagctatctt tttttcactc tggcacccat ctgttcttcc     180

ctggagtcaa acactattac caatttttag gtatacttcc aaagatactt actgcattta     240

caagcacaga cttatattga ttctaaaaga ataagagaca ttttcagcat gttgctttgt     300

tcaacaccac agtatatctt aaagatggtc ccccatcaat acatatagag atctctct       358
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<210>  3116
<211>  4045
<212>  DNA
<213>  Homo sapiens

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ggagagcgcg cgctgccacc gccccatgtc tcagccaggg cttccttcct cggctccacc     120

ctgtggatgt aatggcggcc cctgctctgt cctggcgtct gcccctcctc atcctcctcc     180

tgcccctggc tacctcttgg gcatctgcag cggtgaatgg cacttcccag ttcacatgct     240

tctacaactc gagagccaac atctcctgtg tctggagcca agatggggct ctgcaggaca     300

cttcctgcca agtccatgcc tggccggaca gacggcggtg gaaccaaacc tgtgagctgc     360

tccccgtgag tcaagcatcc tgggcctgca acctgatcct cggagcccca gattctcaga     420

aactgaccac agttgacatc gtcaccctga gggtgctgtg ccgtgagggg gtgcgatgga     480

gggtgatggc catccaggac ttcaagccct ttgagaacct tcgcctgatg gcccccatct     540

ccctccaagt tgtccacgtg gagacccaca gatgcaacat aagctgggaa atctcccaag     600
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cctcccacta ctttgaaaga cacctggagt tcgaggcccg gacgctgtcc ccaggccaca        660

cctgggagga ggccccctg ctgactctca agcagaagca ggaatggatc tgcctggaga         720

cgctcacccc agacacccag tatgagtttc aggtgcgggt caagcctctg caaggcgagt        780

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gcctggcacc tgagatctcg ccactagaag tgctggagag ggacaaggtg acgcagctgc       1140

tcctgcagca ggacaaggtg cctgagcccg catccttaag cagcaaccac tcgctgacca       1200

gctgcttcac caaccagggt tacttcttct ccacctccc ggatgccttg gagatagagg       1260

cctgccaggt gtactttact tacgacccct actcagagga agaccctgat gagggtgtgg       1320

ccggggcacc cacagggtct tccccccaac ccctgcagcc tctgtcaggg gaggacgacg       1380

cctactgcac cttcccctcc agggatgacc tgctgctctt ctcccccagt ctcctcggtg       1440

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tgtccctcca agaactccag ggtcaggacc caactcactt ggtgtagaca gatggccagg       1800

gtgggaggca ggcagctgcc tgctctgcgc cgagcctcag aaggaccctg ttgagggtcc       1860

tcagtccact gctgaggaca ctcagtgtcc agttgcagct ggacttctcc acccggatgg       1920

cccccaccca gtcctgcaca cttggtccat ccatttccaa acctccactg ctgctcccgg       1980

gtcctgctgc ccgagccagg aactgtgtgt gttgcagggg ggcagtaact ccccaactcc       2040

ctcgttaatc acaggatccc acgaatttag gctcagaagc atcgctcctc tccagccctg       2100

cagctattca ccaatatcag tcctcgcggc tctccagggc tccctgccct gacctcttcc       2160

ctgggttttc tgccccagcc tcctccttcc ctccctccc cgtccacagg gcagcctgag       2220

cgtgctttcc aaaacccaaa tatggccacg ctcccctcg gttcaaaacc ttgcacaggt        2280

cccactgccc tcagccccac ttctcagcct ggtacttgta cctccggtgt cgtgtgggga       2340

catcccttc tgcaatcctc cctaccgtcc tcctgagcca ctcagagctc cctcacaccc        2400

cctctgttgc acatgctatt ccctggggct gctgtgcgct ccccctcatc taggtgacaa       2460
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acttccctga ctcttcaagt gccggttttg cttctcctgg agggaagcac tgcctccctt      2520

aatctgccag aaacttctag cgtcagtgct ggagggagaa gctgtcaggg acccagggcg      2580

cctggagaaa gaggccctgt tactattcct ttgggatctc tgaggcctca gagtgcttgg      2640

ctgctgtatc tttaatgctg gggcccaagt aagggcacag atccccccac aaagtggatg      2700

cctgctgcat cttcccacag tggcttcaca gacccacaag agaagctgat ggggagtaaa      2760

ccctggagtc cgaggcccag gcagcagccc cgcctagtgg tgggccctga tgctgccagg      2820

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caactctgtc ttgggcgttt gaactcaggg agggaggccc ttgggagcag gtgcttgtgg      3420

acaaggctcc acaagcgttg agccttggaa aggtagacaa gcgttgagcc actaagcaga      3480

ggaccttggg ttcccaatac aaaaatacct actgctgaga gggctgctga ccatttggtc      3540

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tgggtctatg ccttgaaaaa agctgaatta ttggacagtc tcacctcctg ccatagggtc      3660

ctgaatgttt cagaccacaa ggggctccac acctttgctg tgtgttctgg ggcaacctac      3720

taatcctctc tgcaagtcgg tctccttatc cccccaaatg gaaattgtat ttgccttctc      3780

cactttggga ggctcccact tcttgggagg gttacatttt ttaagtctta atcatttgtg      3840

acatatgtat ctatacatcc gtatctttta atgatccgtg tgtaccatct ttgtgattat      3900

ttccttaata ttttttcttt aagtcagttc attttcgttg aaatacattt atttaaagaa      3960

aaatctttgt tactctgtaa atgaaaaaac ccattttcgc tataaataaa aggtaactgt      4020

acaaaataag tacaatgcaa caaaa                                           4045
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<210> 3117
<211> 573
<212> DNA
<213> Homo sapiens

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<222>  (521)..(521)
<223>  n is a, c, g, t or u

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aaacaaaaga gaaggatgat gagacagaga attacagcag tagaaaggaa aacagaaacc    120

agggcacaca gttccaacac cagaacagag aatttgggaa gataattgct ctgaaacaga    180

actggcctcc ctgtgtctat tagaaaacat ttccaaagct cacggaggga ggccaacttc    240

ccctatggga aacgccattca ctcgccaaag ggcagaaggc atcataaatc acccattgat   300

acattggtgg ggggctcctg tccccctggt gaccactcca aggtgatttg atctgtgctt    360

cctctgttgg gtcagagacg aaacgggcta ttattaggtc aaacattaca gaaatcaact    420

gagactctta actagtagtt gatacaccac agggctttac tttactgcac aattactaac    480

agttgattgc acccttaagt attgattatg caaaaaacaa natcatctcg catcagtttt    540

aaagcatgac agggtttgaa cagtgatctt gaa                                 573
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